



Fall 2021

Volume 29, Number 3



**Featured in this issue:**

President's Corner and Request for Assistant Librarian

C4 at Princeton Battlefield

John Law Coppers in Colonial New Orleans

Why are Colonial Coins so Common?

Miller De-listings – “50 is the New 40”?

Interview with Ken Bressett, *Red Book* Editor Emeritus

Mass. Silver Coinage Defined by “New England”

What was Lost is Now Found: Maris 68-w Plate Coin

Thoughts on “African Head” Connecticut Coppers

Technical Overview of Pre-Federal Minting Processes

Anyone Can Make a Mistake

Continental Dollar: Coin or Medal? (MCA-authorized reprint) and Further Observations on Same

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1/Horizontal 1. AU-55 (PCGS).  
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STATES Below. AU-55 (PCGS).  
Rarity-6 Guide Book Variety.



Newman 13-KK.  
F-12 (PCGS).  
Rarity-7 Die Variety.



Newman 19-SS.  
AU-50 (PCGS).  
Condition Census.

**Selections from the Norman G. Peters Collection of New Jersey Coppers**



1786 Maris 18-M. Bridle.  
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## **The C4 Newsletter**

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**TABLE OF CONTENTS**

President's Corner and Request for Assistant Librarian (C. McDonald; L. Shane)	3
C4 at Princeton Battlefield (R. Williams)	5
John Law Coppers in Colonial New Orleans (M. Smith)	7
Why are Colonial Coins so Common? (B. Eckberg)	11
Miller Delistings or "50 is the New 40"? (M. Vitunic)	13
Interview with Ken Bressett, Red Book Editor Emeritus (J. Burke)	18
Mass. Silver Coinage Defined by "New England" (E. Hildebrant)	22
What was Lost is Now Found: Maris 68-w Plate Coin (R. Moore)	28
Thoughts on "African Head" Connecticut Coppers (R. Clark)	34
Technical Overview of Pre-Federal Minting Processes (C. Sholley)	47
Anyone Can Make a Mistake (D. Gladfelter)	68
Further Observations on the Continental Dollar Debate (R. Siboni and J. Rosen)	69
Continental Dollar: Coin or Medal? (R. Rodriguez and T. Lopez, MCA-authorized reprint)	74
Announcements	82
Classified Ads	92
Sponsor Ads	Covers, 12, 94, 95, 96
Reciprocal Club Ads	4,33,67



## **PRESIDENT'S CORNER**

(Craig McDonald)

Welcome to the Fall 2021 issue of the C4 Newsletter.

As this Newsletter goes to press, the 2021 Whitman Winter Coin Show is a “GO” for November 18 through 20 in Baltimore. Numerous members are working diligently to pull together the various activities and presentations.

One small monkey wrench that was thrown at us was the decision by Stack's Bowers to not hold the physical auction session during the show. As many of you already know, this is becoming the norm within the industry, and was not unique to C4 and our sale. This left a gap on Friday evening during which the auction was normally held. The Convention planning team is diligently working to fill this time slot with other activities.

And again, we are working with Lianna Spurrier to live stream and record all the presentations and meetings for those members who might not be able to attend in person. Keep checking the C4 website for information as things unfold.

Since the last Newsletter, the new book on Connecticut Coppers by C4 member Randy Clark was released to extremely positive acceptance. This 700+ page masterwork is available from both Charlie Davis and Dave Fanning. Sales have been very strong, so if you haven't bought your copy yet, you may not want to delay.

If there is ever anything you wish to bring to your Club's officers' attention, do not hesitate to reach out to your respective Regional Representative, or your VP or President. Everyone's contact information is in the front of each Newsletter, and on the website.

Enjoy the Newsletter!!

Craig



## **ASSISTANT C4 LIBRARIAN SOUGHT**

(Craig McDonald and Leo Shane)

C4 is currently searching for a volunteer to assist Leo Shane as the Club's Librarian.

The library has grown beyond a point where a single person can store and manage all the materials.

The primary duties of the assistant will be to store approximately 25-30 linear shelf space of material in a semi- climate-controlled environment (i.e., no outdoor/backyard sheds), and to assist with mailing out any materials that may be requested.

For additional information or to discuss the position in more detail, please contact Leo directly at: [Librarian@ColonialCoins.org](mailto:Librarian@ColonialCoins.org)

Craig and Leo



## **THE *JOURNAL OF EARLY AMERICAN NUMISMATICS* AND THE AMERICAN NUMISMATIC SOCIETY CONGRATULATE JEFF ROCK ON HIS RECEIPT OF TWO PRESTIGIOUS NUMISMATIC LITERARY GUILD AWARDS**

In August 2021, *JEAN* contributor and editorial staff member Jeff Rock received two Numismatic Literary Guild Awards for his article “Collecting American Colonial Coins in Eighteenth-Century England,” which appeared in the June 2020 issue of *JEAN*. Jeff’s article includes detailed information on the life and numismatic collection of Sarah Sophia Banks (1744-1818), along with images and descriptions of her American Colonial coin collection now split between the British Museum in London and the Royal Mint Museum in Llantrisant, Wales. Jeff’s monograph was awarded the Best Article on Numismatic History and Personalities, and Article or Story of the Year. This latter award is exceptional as it covers every numismatic article (commercial, academic, large-, and small circulation).

This is the second year in a row in which a *JEAN* author has received these awards. In 2020, Q. David Bowers received Best Article on Numismatic History and Personalities for his “John J. Ford: A Life in Three Portraits,” which appeared in the June 2019 issue. Also, in 2020 “The Authentic Fugio Restrike Dies” by Christopher McDowell and Julia Casey was recognized by NLG as the Best Feature Article on Early American Coins and likewise received the top prize of the James L. Miller Memorial Award for Article or Story of the Year. If you are not a *JEAN* subscriber, you are missing out on these and other great articles.

Issues of *JEAN* normally run around 200 pages or more and contain articles on a variety of American Colonial numismatic topics. Subscribe to *CNL*: <http://numismatics.org/store/cnl/>. \$65 per year for ANS members and \$85 for non-members. Contact Christopher R. McDowell, at [crmcdowell@strausstroy.com](mailto:crmcdowell@strausstroy.com) for additional information. *JEAN* has a zero-tolerance policy for plagiarism and will not publish articles that include items currently in (or currently being prepared for) commerce.



## C4 AT THE PRINCETON BATTLEFIELD SUNDAY, SEPTEMBER 12, 2021

(Ray Williams)

On Sunday, September 12, the Princeton Battlefield State Park held a public event where the public was able to attend and enjoy some Revolutionary War history. The Battle of Princeton occurred January 3, 1777, shortly after the Battle of Trenton. In addition to cannon and musket firing, the event had tables set up where different aspects of colonial history were exhibited. C4 members Bill Liatys (l) and Mike Brooks (r) manned an exhibit table from 11:00 AM until 4:00 PM. They had three cases of numismatic material, much of which related to local and Revolutionary War history.

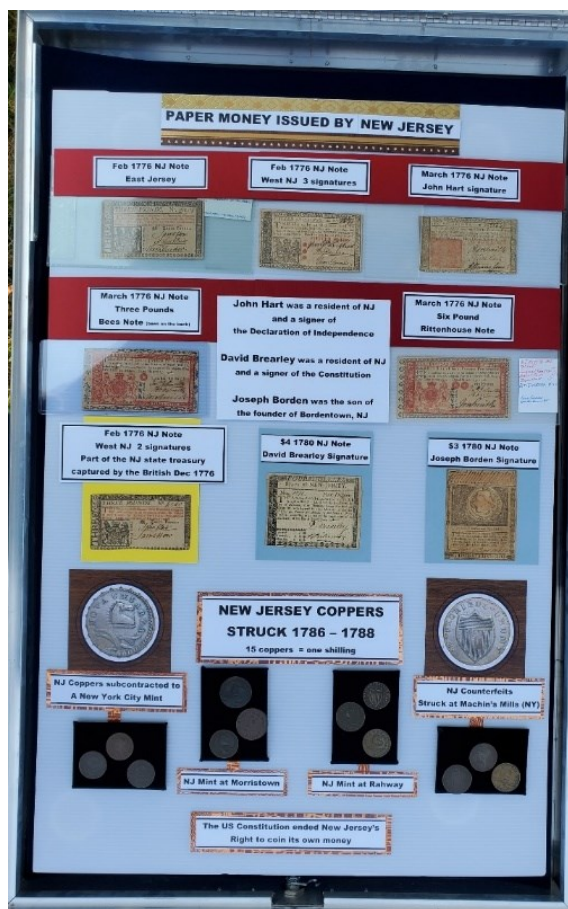
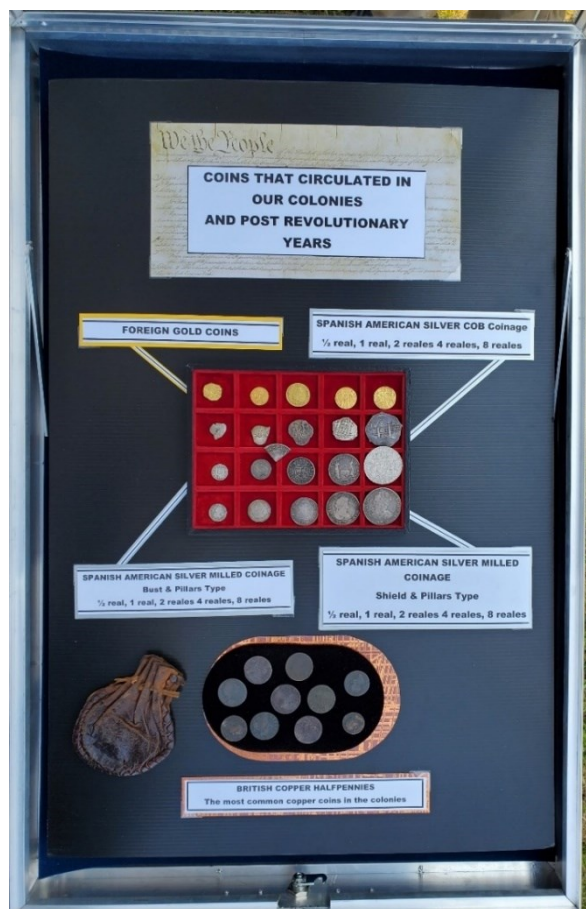


The first case contained coins that were commonly seen in colonial commerce: Spanish silver of 5 denominations and three types. Several gold coins from Spanish America, Holland, and Brazil were also displayed.

The second case contained Continental Currency from each of the legislated emissions. Included among the bills was one signed by Anthony Morris, who died from wounds in the battle. He and General Mercer were both treated for their wounds and both died in the Thomas Clarke house, still located on the battlefield today.

The third case contained New Jersey paper money from 1776, including a bill that was part of the New Jersey Treasury captured by the British on December 9, 1776. Also in the case were twelve NJ Coppers: 3 from the Rahway Mint, 3 from the Morristown Mint, 3 from Machin's Mills, and 3 from John Bailey's Mint in New York City. Time passed quickly as Bill and Mike fielded questions and handed out information about coin clubs to those interested. Thank you Bill & Mike for promoting our hobby!





# JOHN LAW COPPERS IN COLONIAL NEW ORLEANS

(Martin L. Smith)



Louisiana alligator, catfish, and Gulf shark. From a London magazine, 1739.

This article will begin with the arrival of the ship *Dromadaire* from France carrying 13,000 *livres* in copper coins of the *Piece de Nine Deniers* type on October 2, 1727 (Surrey reference.) This was the documented shipment referred to in Breen's *Encyclopedia* and other references. The coins had been sent to Canada in 1722, where they failed to circulate. They sat in storage in Canada until September 1726, when they were returned to France aboard *l'Elephant* arriving at Rochefort. They were then sent aboard the *Dromadaire* to New Orleans. The number of coins received at New Orleans differs by source. Approximately 260,000 coins arrived according to Surrey. According to Breen, this number was closer to 526,000 coins. Yet a third source (Devron) says about 400,000 coins.

The *Dromadaire* shipment is the only well-known cache of copper coins officially sent to New Orleans. The question is, were there earlier shipments of the *Pieces de Nine Deniers* that were not documented? Or were there already other copper coins in circulation in colonial New Orleans? It is certainly possible that French authorities sent casks of copper coins without documentation, given their indifference toward copper coins. Or, any such documentation has been lost over time. It is also possible, even likely, that "copper coins" in that day and place referred to more than one coin type. In colonial times in general, coins were viewed in terms of metal content. Little attention was paid to the designs that we collectors, 300 years later, pay so much attention to.



It is this author's opinion that John Law coppers circulated in colonial New Orleans, side-by-side with the *Pieces de Nine Deniers*, and with Spanish silver and copper coins. Evidence for this view will be presented, particularly the 1916 article by Surrey.



French copper coin (half-sol) of the John Law type, bearing a child head bust of Louis XV and the French coat-of-arms, dated 1720. Weight officially 6.118 grams. Diameter, 25-26 millimeters. Copper content, 90-95%. Legal tender in France and French Colonies.



*Piece de Nine Deniers* copper coin, dated 1722. According to Bowers, these were called “Louisiana Coppers” by nineteenth-century collectors. Weight officially 6.118 grams. Diameter, 25-26 millimeters. Copper content, 90-95%. Legal tender only in French Colonies (not legal in France.)

From the Surrey text:

*By a decree of May 2, 1724, applicable both to France and to the colonial dominions, the copper coinage was made to suffer a reduction in value. That circulating in Louisiana was...to have the following values: ...eighteen deniers to pass at twelve...those of nine [deniers] to pass at six...and those of four and a half [deniers] to pass at three...colonial officials were given explicit orders for the enforcement of the decree.*

This order clearly included John Law coppers for two reasons: 1) The *pieces de nine deniers* were not legal to circulate in France. The order says “France and colonial dominions”, in line with the John Law copper coins and their use in trade. 2) It is clear that the order includes three sizes of copper coin, consistent with the sol (28-30 millimeters,) half-sol (25 millimeters,) and liard (21 millimeter) of the John Law copper coinage. The order would also have applied to the *Pieces de Nine Deniers*, causing them to pass at 6 deniers (consistent with their weight and diameter, identical to that of the half-sol.)



The colonists complained about copper coins in the years preceding the arrival of the *Dromadaire* with its copper coins on board. This account, also from the Surrey text, September 7, 1723:

*I sent everywhere to get a couple of eggs, offering as much as....[copper sols] apiece, but could not find them. Those who sold them replied that....if we have white money [i.e. silver] ...they had eggs to sell...but they would not accept copper money.*

Small-denomination Spanish silver coins did circulate in colonial New Orleans, obtained mainly through trade with the Spaniards at Pensacola. Any French silver quickly returned to France aboard merchant ships.



Spanish *half-reales*, a small (16 millimeters; 1.22 grams) silver coin. These coins were called “pickayunes” in colonial Louisiana (a colloquial expression that has survived in that region.) This coin would have been useful in colonial Louisiana, such as in buying groceries. Spanish silver coins were assigned French equivalents by an order of January 6, 1732. A *half-real* such as the one pictured was assigned a value of 6 sols and 3 deniers.

Here is an interesting grocery price list from Baron Marc de Villiers, *A History of the Foundation of New Orleans (1717-1722.)* Translated by Warrington Dawson. The Louisiana Historical Quarterly 3-2 (1920) pp.157-253:

For the years 1721-1722, New Orleans: a *Compagnie des Indes* store, and one hundred and eight free workmen kept in the colony

Workmen’s salaries:

“Rarely exceeded 8 sols and 6 deniers per day”

Company store prices:

“French” beef 20 sols per pound

Native beef 10 sols per pound

Quarter venison 2 livres

Small fowl 20 sols

Eggs 50 sols per dozen

Beans 5 sols per pound (60 *deniers*)

Note that the prices are given in sols and half-sols, consistent with John Law's Coppers. None are in multiples of nine deniers.

Lastly, the Louisiana State Museum has among its holdings a John Law half-sol. It is perhaps the same coin found at Mobile Bay (Waselkov.)

**Sources:**

Surrey, NM Miller, "The commerce of Louisiana during the French Regime, 1699-1763" in *Studies in History, Economics, and Public Law*, Vol 71, Number 1, New York, Columbia University, 1916, pp. 101-113.

Breen, Walter, *Complete Encyclopedia of U.S. And Colonial Coins*, New York: Doubleday, 1988.

Devron, GD, "Copper currency in Louisiana in colonial times" in *Proceedings of the State Historical Society of Wisconsin*, December 14, 1893, pp. 168-171.

Bowers, Q. David, *Whitman Encyclopedia of Colonial and Early American Coins*. Atlanta, GA, Whitman Publishing, 2009.

Villiers (web link)

[https://www2.latech.edu/~bmagee/louisiana\\_anthology/texts/de\\_villiers/de\\_villiers--new\\_orleans\\_founding.html](https://www2.latech.edu/~bmagee/louisiana_anthology/texts/de_villiers/de_villiers--new_orleans_founding.html)

Louisiana State Museum, *Fourth Biennial Meeting of the Board of Curators*, New Orleans, LA, 1914, p.81. Also Waselkov, Gregory A, *Old Mobile Archaeology*, University of Alabama Press, 1999, p. 35.



## WHY ARE COLONIAL COINS SO COMMON?

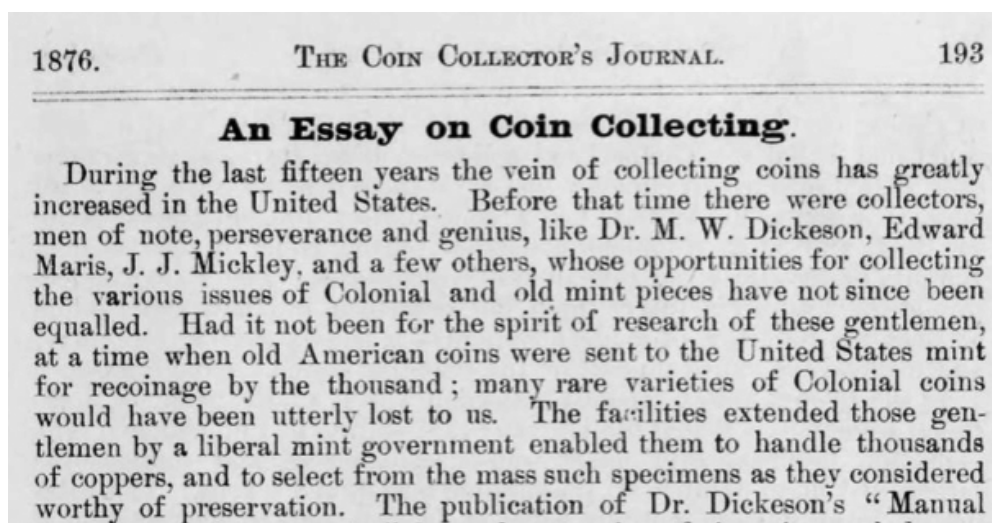
(Bill Eckberg)

We don't usually think of colonial coins as common. Certainly, no colonial variety is as common as the 1909-S VDB Lincoln cent or the 1893-S Morgan dollar, which are the keys to their series. So, "common" is a context-dependent phenomenon.

Indeed, it's a wonder that these things have survived in significant numbers at all. They were generally overvalued for their metal content and were never legal tender. We don't know for sure how the Mint valued them when they were exchanged for Flying Eagles, but the best estimate<sup>1</sup> is that all of the coppers were taken in by weight, assuming a 168 grain standard for a large cent and half that for a half cent. Worn federal coins from 1795 and later would weigh marginally less; those from 1793-95 would weigh more, having been struck at a heavier standard. Since most pre-federal coins were of variable weights, we can presume that they too were accepted by weight. It would seem unlikely that people bringing in old copper would have cared too much what each one weighed, as what they wanted was the new "nickel" coins. The Mint didn't care what the coppers were either, as its goal was to melt them down for recoinage into something else.

But there were those who DID care very much. Local coin dealers had an interest in what was turned in at the Mint, and several of them got access to go through the coppers. What did they select? Generally, it would be something they could sell for a profit or that they thought was otherwise worth their while. We can be certain that they culled out and saved the "thick" cents and half cents of 1793-95, as they are more common relative to their mintages than the thin planchet cents and half cents of the next decade<sup>2</sup>.

We also know that they preferentially saved many pre-federal coins:



<sup>1</sup> Craig Sholley. Personal communication, 8/23/2021.

<sup>2</sup> Bill Eckberg. *The Half Cent, 1793-1857. The Story of America's Greatest Little Coin*. Early American Coppers, Inc. 2019.

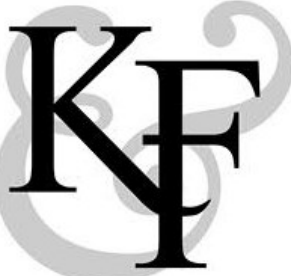


The above quote is taken from Édouard Frossard<sup>3</sup>. Many of us will not disagree that Dickeson, Maris, Mickley, and a few others were “men of note, perseverance and genius,” but I, for one, feel a bit more cynical that it was “the spirit of research” that got them the opportunity to go through the early coppers. I marvel at the fact that the Philadelphia Mint supported their businesses by allowing them to do so. But then, there was a lot going on under the table at the Mint in the 1850s. But that is another story.

Frossard is correct, though, that had they not been able to do so, it cannot be doubted that “many rare varieties of Colonial coins would have been utterly lost to us.” It also cannot be doubted that other, slightly less rare, varieties would be far more difficult to collect than they are.

So, we need to thank Messrs. Dickeson, Maris, Mickley, *et al.*, for having the foresight to get the Mint to support their businesses and, as a result, to make our hobby even more enjoyable.



The logo features the letters 'K' and 'F' in a large, stylized, serif font. The 'K' and 'F' are intertwined, with the 'K' having a circular element around its base and the 'F' having a similar circular element around its base.

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<sup>3</sup> Frossard, Édouard. *The Coin Collector's Journal*. 1876, p. 193.

## MILLER DELISTINGS or “50 IS THE NEW 40”?

(Mark R. Vitunic)



**Figure 1.** Connecticut/Vermont mule with Miller Painted Die Variety (PDV)

I just finished my first pass through the two most recent C4 publications: *The History and Coinage of Machin's Mills*, by Howes/Rosen/Trudgen, and *The Identification and Classification of Connecticut Coppers (1785-1788)* by Clark. Congratulations to all authors on two excellent works and thanks for contributing to our knowledge base! One thing that jumped out to me, however, was reference in both texts to the 1788 Connecticut Miller varieties 100-I, 125-I, 128-I, and 129-I, more commonly known as Vermont Ryder-Richardson 31, 25, 28, and 29, respectively. I wondered why these coins had ever been given Miller numbers when neither the obverse nor the reverse is from a primary Connecticut die.

A quick search revealed that Miller variety 100-I was first proposed as a Connecticut copper by Barnsley in 1961<sup>1</sup>, while Miller varieties 125-I, 128-I, and 129-I appear to have been first mentioned as being Connecticut coppers by Barnsley in 1972.<sup>2</sup> Breen (1988), Carlotto (1998), and Bowers (Whitman 2009, 2020) did not use these Miller designations, instead sticking with just the Ryder-Richardson numbers. Outside of the two aforementioned C4 publications, usage of these Miller numbers is not too common –but they do appear sporadically in auction lot descriptions both at StacksBowers and at Heritage.

New die variety designations to Miller (and Ryder, Maris, etc.) get proposed from time to time, then debated, and then added (or not) to the taxonomy –however, in most cases they are utter rarities. Miller (1920) can certainly not be faulted for not including varieties that he had never seen. But that is not the case with 100-I, 125-I, 128-I, and 129-I, as Miller was well aware of their existence and correctly (in my opinion) chose not to include them in his Connecticut copper listings. After Miller's untimely death, his yet-unpublished text was reviewed and then published by Ryder, who clearly would have been familiar with these four coins as well. Notably, however, he also didn't act on adding them to the Miller taxonomy.

<sup>1</sup> Barnsley, Edward R., *The Colonial Newsletter*, April 1961, Sequential Page 12.

<sup>2</sup> Barnsley, Edward R., *The Colonial Newsletter*, January 1972, Sequential Page 339. Clark (2021) mistakenly credits Rock (CNL 1991) with adding these to the Connecticut taxonomy.

What makes a die variety designation legitimate? The predominate practice has been that in order for a coin to be included in the taxonomy for a given series, at least one of the two dies should be primary to that series. Referring to Figure 2, a die marriage chart for the 1788 Miller 1-I (aka RR-39), the obverse die is a “no questions asked” Connecticut (1788 Miller 1) based on its obverse legend, which is married to a “no questions asked” Vermont reverse die (Bressett U), found on the RR-25, RR-28, RR-29, and RR-31. This “mule” deserves a listing in both taxonomies.<sup>3</sup> Consequently, the 1788 Connecticut Miller 1 obverse also became known as Vermont Bressett obverse 25, and the Vermont Bressett U reverse also became known as the 1788 Connecticut Miller reverse I<sup>4</sup>. So mules certainly count. But varieties formed by *other* Vermont obverses married with that same shared Vermont Bressett reverse U make no sense to “Millerize”. These are “second cousins”, and in my view, are not legitimate Miller varieties.

Granted, jumping to a 3-digit Miller obverse number implies a “separate but equal” status (Barnsley even coined the term “Semi-Connecticut”) but better yet would be no Miller number at all! What about the 1787 Miller 101-G.2 and the 1788 Miller 101-D? These mules are definitely legitimate Miller varieties because they each use a reverse die which is *primary* to the Connecticut series.

Let’s see what would happen if we were to follow the same overzealous inclusionary logic with the rest of the Ryder-Richardson Vermonts. There are 39 numbered varieties, of which four are mules: RR-1, RR-13, RR-31, and the aforementioned RR-39. If we were to import “second cousins” into Ryder’s taxonomy we would need to add 4 more varieties that share Bressett reverse Z with the RR-1 (which has a Vermont obverse die, see Figure 3), 6 more varieties that share Bressett reverse V with the RR-13 (which has a Vermont obverse die, see Figure 4), and 2 more varieties that share Bressett obverse 25 with the RR-39 (which has a Vermont reverse die, from Figure 2).<sup>5</sup> That would be 12 more coins to “Ryderize”, bringing us to 51 Ryders to collect! Wow- Is 50 the new 40? Obviously that would be ridiculous and I am clearly not advocating for it. But what I am advocating for is discontinuing the usage of Miller numbers 100-I, 125-I, 128-I, and 129-I.<sup>6</sup> Assigning Miller numbers to these varieties only makes sense if you don’t consider 1788 Miller 1-I a mule by treating Bressett reverse U as a primary *Connecticut* die.

And Henry Miller himself would agree with that.

[Note: all photos not labeled “Imaged by Heritage” are courtesy of StacksBowers.]

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<sup>3</sup> Richard August is credited with adding RR-39 to the Ryder taxonomy.

<sup>4</sup> This second one actually took place “out of order” as Bressett designations were not created until 1976.

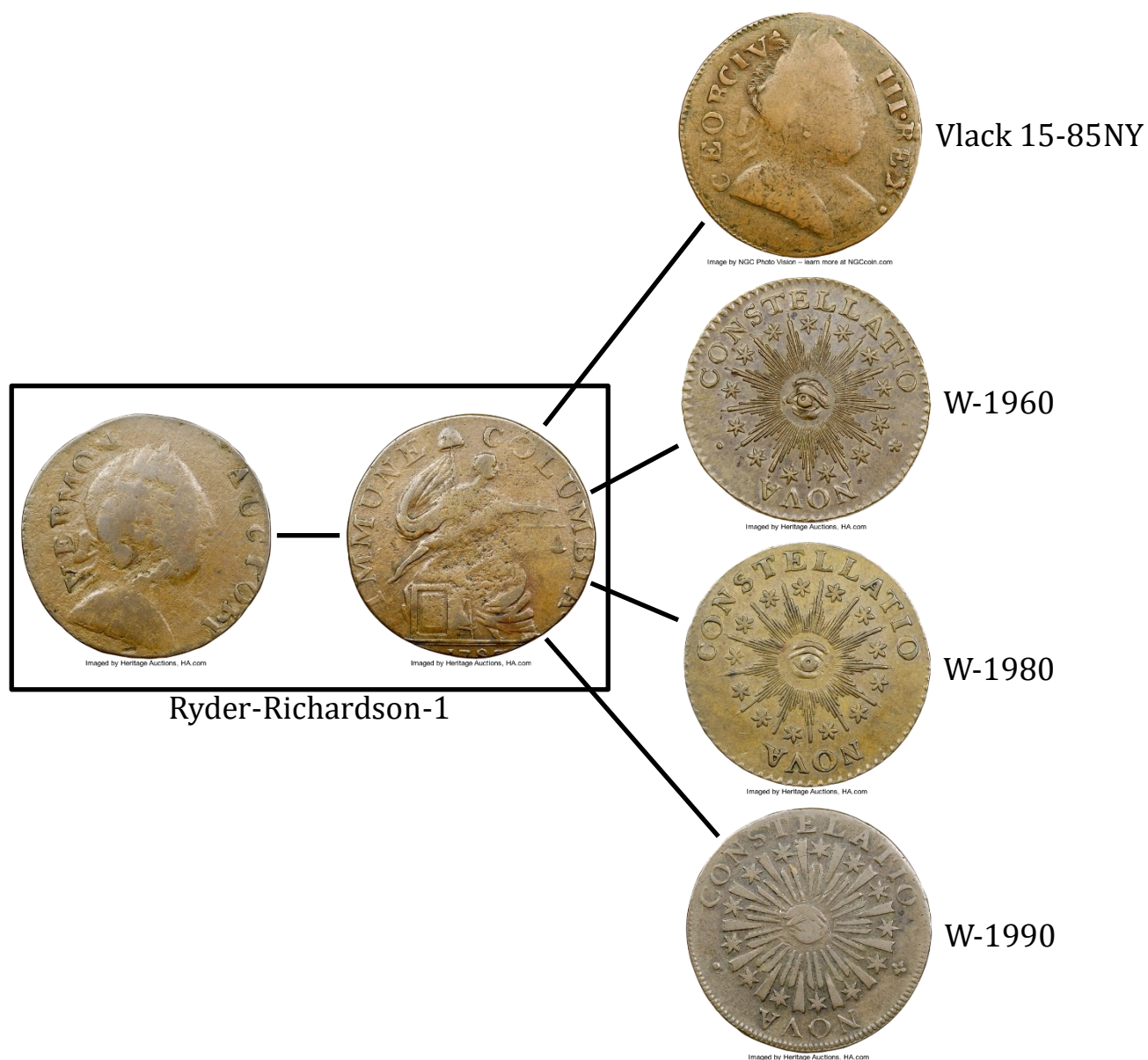
<sup>5</sup> Bressett obverse 24 from RR-31 has no other die marriages.

<sup>6</sup> My apologies to any collector proudly sitting on between 300 and 303 Connecticut “Miller” varieties which might include counting these four. Clark (page 117) correctly does not include these four in his “354” complete set number but does include the 1788 M. 1-I mule. However, he excludes the 1787 M. 101-G.2 and 1788 M. 101-D mules, which I would argue are legitimate Miller varieties- bringing us to “356”.



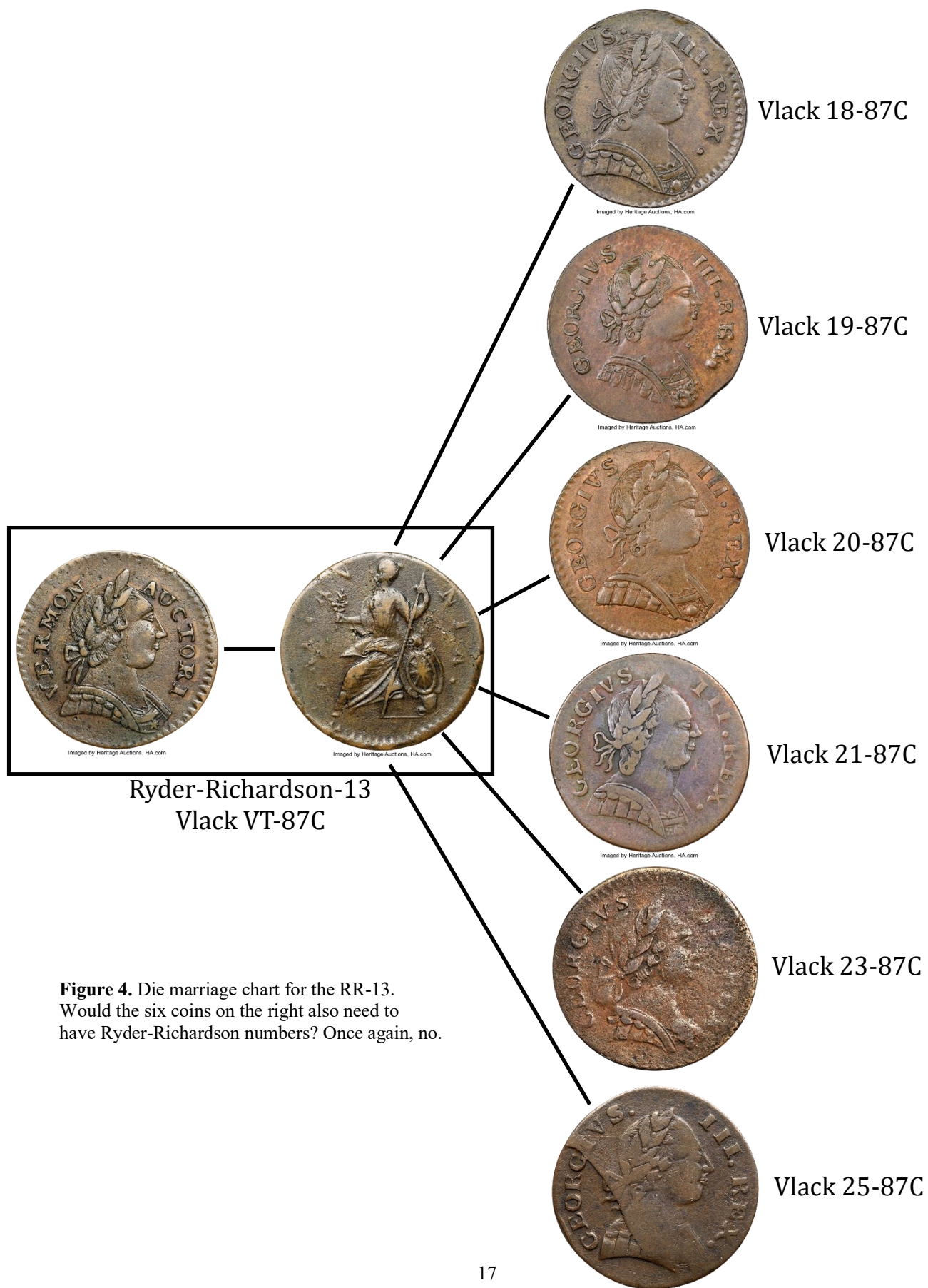


**Figure 2.** Die marriage chart for the 1788 Miller 1-I, aka RR-39. Should the four coins on the right have been given Miller numbers? And if that is logical, by the same token wouldn't the two coins on the left need to have Ryder-Richardson numbers? I argue no, in both cases.



**Figure 3.** Die marriage chart for the RR-1. Would the four coins on the right also need to have Ryder-Richardson numbers?<sup>7</sup> Again, no.

<sup>7</sup> Dick August made a multi-pronged argument for including Vlack 15-85NY in the Ryder taxonomy as RR-40, but as it is still a “second cousin”, I respectfully disagree. [August, Richard M., *Proposal – New True Vermont 40*, C4 Newsletter, Summer 2017, pp. 37-38.]



**Figure 4.** Die marriage chart for the RR-13.  
Would the six coins on the right also need to  
have Ryder-Richardson numbers? Once again, no.

## **INTERVIEW WITH KEN BRESSETT, EDITOR EMERITUS OF THE *RED BOOK***

(Jeff Burke)

### **Introduction**

I am grateful to Ken Bressett, Editor Emeritus of the *Red Book*, for setting aside the time to answer my questions about *A Penny Saved*, the “Bressett” system for designating Vermont colonial varieties, and other topics. I conducted a Q & A interview with Ken through an exchange of emails in July 2021.

I (like many others) have been fortunate to meet Ken a number of times at the ANA Summer Seminar. In 2010, I introduced myself to him in the dining hall and told him that when I started collecting coins at the age of ten in 1968, the *Red Book* was the first coin book I read. I thanked him for his decades of hard work on revising this reference guide. Several years later, Ken Bressett, Roving 2012 Summer Seminar Instructor, stopped by to visit our “Early American Copper Coinage I and II” class taught by Doug Bird and Steve Carr. Ken told us that he loved early American coppers and ancients. Ken said that he was open to suggestions for *Red Book* updates. And now, see below an update on Ken Bressett!

### **Questions and Answers**

#### **1. What can you tell us about your book *A Penny Saved: R.S. Yeoman and His Remarkable Red Book*?**

*A Penny Saved* tells the story of Richard S. Yeo, better known to most coin collectors as R. S. Yeoman, and his extraordinary *Red Book* as seen through the eyes of several generations of readers who were instrumental in making it an essential part of their involvement in the hobby of coin collecting. It is a memorial dedicated to the thousands of contributors who adopted the book as an extension of their own connection with coins, and helped in numerous ways to make it as inclusive, detailed, and accurate as possible.

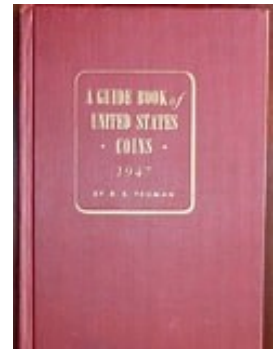
This year marks the 75<sup>th</sup> anniversary of annual editions of the *Guide Book* that has become a universal favorite among coin collectors for longer than any other similar reference. The reason for the *Guide Book*’s longevity and popularity is its detailed information about the technical aspects of each coin as well as accurate and unbiased assessments of retail values. When it first appeared in 1946 it was one of the few such price guides not produced as a dealer’s sales catalog.

In addition to this essential price guide, Yeoman produced a number of other related numismatic books covering both wholesale and retail coin values, world coins and other popular titles, as well as a wide array of coin collecting boards, albums, holders, and whatever else he felt would benefit collectors in pursuing their hobby. The background



stories told in *A Penny Saved* are full of little-known facts, humorous incidents, and history that has never before been revealed.

As one who was intimately involved with all aspects of the *Red Book* almost since its inception, I had the privilege of working with Yeoman for more than 10 years, and knowing him for more than 30 years until his untimely death in 1988. Our first meeting I recall was in 1956. I was not alone in my connection with the author. He had a keen sense for seeking and finding skilled numismatists who would be beneficial to making his publications as useful as possible.



**2. Can you share some stories about your early years of collecting? Did a grandparent or other figure pique your interest in collecting coins?**

Like most youngsters of my generation, we were natural collectors of just about everything. Stamps, coins, matchbook covers, aggies, comic books, and sports cards were popular trading material. After I had accumulated several Indian Head cents and other odd coins, I liked them best and concentrated on them. Back then it was easy to find just about everything in change from 1892 on, and even some of the Liberty Seated coinage. Of course, my income of about a half dollar a week from mowing lawns didn't go very far, but with a few gifts from friends and neighbors I soon felt like a true collector.

By the time I was in high school, I was able to get a part time job in a grocery store and there I was given permission to view the daily cash flow and select any items that I could afford to save. It didn't take long to build a complete date and mint set of Buffalo nickels, and all of the Lincoln cents except the 1909-S VDB. Living in New England it was always unusual to find any coins from San Francisco. And it was common to know people who had a few very old coins in their "cookie jar." So, from time to time I would even be able to purchase some of the older coins dating back to Colonial times, like Fugio cents and Connecticut coppers.

The only unusual coin that was ever passed on to me by a family member was a well-worn silver half *real* of 1799 that my grandmother had received in change and carried in her purse for years. I still cherish that, of course, as a valued treasure.



**3. During your March 2021 Numismatic Notables interview with Leonard Augsburger and Joel Orosz, you mentioned acquiring some choice colonial coins that had probably been stored in old houses for a long time. What were some examples?**

The incident referred to in that interview concerned some activities when I was much older and occasionally had an opportunity to be involved in a few major coin transactions. In that case I was asked to help broker a sale between some friends involving

several rare Colonial coins. As I recall, it involved several silver Massachusetts pieces, including a NE shilling, a Birch cent, and a general assortment of other high-grade items. From my compensation I was able to purchase one of the more common Massachusetts coins.



**4. Although Vermont copper dies are referred to as “Ryder” numbers, you developed an attribution system that numbered obverses and lettered reverses. Your system seems to be gaining traction. How did you devise this new system?**

Coinage of the early Republic of Vermont has long intrigued me. My birthplace in New Hampshire was only a few miles away from where those coins were made, and I had the good fortune to find a few of them that had been saved in old homesteads. By 1950 I began seriously studying and collecting the various varieties, often sharing information with Richard Picker, Walter Breen, and Eric Newman. At that time “Ryder” numbers were universally used, but it became obvious to us that a better system was needed to better define die combinations and chronology. In 1976 I was asked to write an article for the American Numismatic Society’s publication *Studies on Money in Early America*, and I thought that would be an ideal place to present my research and information on the subject. Since that time all major catalogers have used the “Bressett” system of numbers and letters to designate each variety.



Vermont Bressett 5-E

**5. What has been your most recent collecting focus?**

I no longer actively collect any numismatic items. I do however still have a very keen interest in the hobby, and continue to study and research areas that are of special interest to me. Currently that is mostly focused on ancient Greek silver coins.

**6. You served as the ANA’s Education Director from 1985 to 1988. What are some of the highlights from your directorship?**

Perhaps the most significant event of that era was my involvement with the ANA Summer Seminars. The association was experiencing some financial difficulties at that time and there was a serious question whether the Seminar should be continued on a deficit basis. I did my best to find ways to increase financial support, and to continue the classes by increasing the cost of tuition. With the help of many, the Seminars have continued and grown to be probably the most popular of all ANA benefits over the years.

**7. During our orientation at the 2012 ANA Summer Seminar, we were told that you have been a Seminar instructor since 1974. What courses have you offered at the Summer Seminar? What are some of your fondest teaching memories?**

Yes, I have been a Seminar instructor, or somehow involved, with the classes since 1974. During that time, I have conducted, or been a co-instructor, in more classes that I can remember. Some of my favorites were on Colonial coins, Ancient Roman coins, Writing and Publishing, U.S. Type Coins, and Grading. My fondest was one on Early American Coins that I taught with Eric Newman as co-instructors.



Longtime Seminar instructors Bill Fivaz (left) and Ken Bressett are frequently seen at ANA classes.

**8. What advice would you offer to young numismatists or adults who are reticent about writing their first article for publication?**

My relentless advice to anyone interested in numismatics is to follow your heart and not the crowd. That applies to whatever one wants to collect, study, or write about. In writing, one should not only know the subject, but the intended audience. Not all articles have to be profound or learned to be appreciated and enjoyed by your readers. First-hand experiences, unusual facts, and historical notes are always welcomed by information seekers.



## **“MASATHVSETS” STERLING SILVER COINAGE: DEFINED BY “NEW ENGLAND”**

(Eric M. Hildebrant)

The title of this article is inspired by the realization that every coin must have a valid political issuing body. This article will show how the silver coinage of Massachusetts is an expression of creating “New England” as the “top” governing body to surpass Massachusetts, as seen by the legends on the coins themselves. Supporting this idea is that in 1643, the “New England Confederacy” was established with pledges by all the relevant colonies (R.I., Conn., etc.) to come to their mutual aid in times of conflict. Also, comparison of the Massachusetts “Tree” shilling’s artwork with that of the English shilling gives a very interesting picture of how political statements are often conveyed by the “coin of the realm.”

The “Mercantile System” England used with the colonies provided very little circulating coinage for her colonies. One exception is at the conclusion of the third French and Indian war when some halfpennies and farthings were sent to Massachusetts, as compensation for their help in the war. This bad situation of having specie (gold and/or silver in equal to or better than 90% purity) flowing almost exclusively from the colonies to England and not much in return except counterfeit halfpennies will ruin a political body’s financial basis. I base the desire to have “New England” be the reigning body over Massachusetts since the very first of the colony’s coin issues has “N E” in script on one side, and “XII” on the other. I will also present a theory as to why the colony was spelled “Masathvsets”, and not “Massachusetts.” Finally, a metrology will be given to explain the “obviously” (less than 60 grains) cut down shillings we find today, and how they fit into the different colony’s money valuation schemes.

Fortunately for New England, Charles I was beheaded in 1649, and so the Colony took advantage of this by making Sterling silver shilling coins at a weight of 71.6 grains for Massachusetts vs. 92.6 grains for the English. This was done in an attempt to keep the coinage in New England. Also legislated by the General Court were two, three, and six pence coins in proper weight ratios. We’re getting ahead of ourselves with the story, so I will restart!

When I saw my first *Red Book* of coins, I was fascinated by the colonial Massachusetts Sterling silver coinage. The artistic / mechanistic progress of the designs (N E, Willow, Oak, Large / Small Planchet Trees) is beautiful and elegantly primitive. No other colony had such an extensive number of silver coins (15 different denominations and types.) And, I thought, maybe someday in the distant future, I’d be able to afford one of them!

The first convenient time I was able to acquire one was at the Worthy Coin Corporation’s Saturday afternoon bid-board coin auction. This was about 22 years after I first saw the *Red Book* pictures! I was successful in acquiring a Large Planchet Pine Tree shilling (Noe 5) that has ragged edges around 10 to 2 o’clock. It also has a pronounced (about 1/16 of an inch) sinusoidal bend to it, horizontally with the center of the bend coinciding with the center of the coin. I was lucky to be able to get the coin for a reasonable amount of money since at the time no one knew that the coin was struck on a rocker-press, and that ragged edges



sometimes occurred on an original coin. Also, a certain dealer noted for his desire for Mass. Silver was absent from the auction that day. The piece is full weight (72.1 grains) and has the appearance of a potato chip (saddle-like,) due to the very high offset of the rocker press coin centers. People at the auction thought that the coin was bent and raggedly clipped, which helped me to get it at a price that I could barely afford. Mass. Silver has always seemed too expensive! It also has vertical metal flow lines around the letters of the legends, whereas a screw-press would have radial metal flow lines. I have gotten off subject somewhat, such an easy thing to do when writing about Massachusetts (or New England) silver coin.

In this article, I would like to discuss three subjects about the New England Silver coins. They are:

- An artistic and iconographic comparison between the basic “Tree” shilling and the 1633 – 1634 shilling of Charles I of England.
- How some coins show evidence of what happens when the planchet slightly overlaps the edge of the die. Also interesting is when the coin is the product of a slightly too large (in length) planchet. A ragged edge can appear at the top (K12) or bottom (K6) of the coin, since the ragged edge was there before it was struck, and the dies did not impress this piece of metal. This usually happens when the planchet was cut from the end of a strip of the sheet. Often, the coin is full or slightly overweight.
- A re-examination of the weights of “purposely and obviously” clipped shillings. This area of investigation was previously presented in the Spring of 2008 (Volume 16, #1) *C4N*.

### **Artistic and Iconographic Discussion**

Comparing the Charles I shilling (Seaby 2789) to the “Tree” shilling evokes many artistic correlations, similarities, and differences in style. Both coins have the denominated value in roman numerals prominently displayed. Both coins, on the obverse and reverse, have a circle of small beads concentric with the center of the coin. They both also have their legends between this bead border and in addition, there is another circle of small beads framing the legends and the edge of the coin.

We will make the equation that the King’s image and “XII” (for twelve pence) as seen on the obverse of the English Shilling are equivalent to the “tree” shilling’s “XII” and the legend “*ANO DOM*” along with the date from the birth of Christ (1652,) as on the obverse of the “tree” shillings. The following (“a” thru “d” + “g”) elaborate on this theme:

- a) The King’s effigy is replaced by “1652” and the legend “*ANO DOM*” (*anno domini*, or, “in the year of our lord.”) So, the King (Charles I or any other) no longer represents G-d in the ruling of the country and is no longer a ruler of the colony. Recall that the King was beheaded in 1649, and in 1652 there was no

King of England. Here is the written expression (somewhat abbreviated due to space requirements) that G-d will be “the Lord of the colony.”

- b) The English legend of “*CHRISTO AUSPICE REGNO*” (“I reign under the auspice of Christ”) is replaced by the informal government at the time of “NEW ENGLAND.” Recall how on the first “N E” shillings of Massachusetts, only the initials in script of “N E” identified the issuing authority. This all reinforces the idea that for New England shillings there is only the theological King (Christ, our Lord) and Charles I (or any other King of England) has no special significance as the ruler of the New England colonies, at least as far as the American colonies were concerned. From 1686 thru 1689 New England was acknowledged as the supreme political unit of the northern east coast colonies. Recall how in 1643 a mutual defense confederacy of the New England colonies was formed. How the political nature of “New England” was formed is the subject of another article, which I am not really capable of doing, but there were obviously attempts to create this as a superior ruling body of government in the days from 1620 to 1686.
- c) Turning to the tree side of the “Tree” shilling coins, a case can be made that this is the real reverse, since the English shilling had the denomination and implied date based on the monarch’s effigy on the obverse. On the English shilling a heraldic shield of Charles’ desired union of Scotland with England is replaced by the New England coins with a Willow, Oak, or Pine tree, representing the wealth of a land to be exploited by the very first grouping of people to form “NEW ENGLAND.” As previously mentioned, a circular beaded border defines the area for the legends. This echoes the theme that the English Shield represents the dominion that the King has over it, and that the very old and desirable trees (especially large, tall pine trees) were the dominion of the colonies.
- d) In conclusion, the representation of England and Scotland as a political union (not officially until Queen Anne,) and its rule by Charles I as G-d’s representation on earth is replaced by the very basic statement that there is no “King” of the colonies but Christ, and the issuing political body emulates a parallel with primitive nature. A new beginning for a new independent government, ruled by no single King, but by G-d. A very Puritan ethic.
- e) The “Tree” shilling is 25% lighter than the English shilling (about 71.6 grains vs. 92.6 grains.) Both are sterling silver. This was done as an attempt to keep the coinage in Massachusetts. Specie (precious metal) was always in short supply, and by letting any citizen take silver to the mint and have it “up-valued” by 25% (as long as the coins were in “Massachusetts in New England,”) it was thought that the coins would stay there, since anywhere else in the non-New England colonies the coin would be valued as simply a piece of sterling silver.

- f) A side-by-side comparison of the English shilling and the “Tree” shillings shows to me that the “fabric” and style of the coins is about 50% similar, and 50% different. Not surprising since the later “Tree” coins were struck on a rocker or screw press, and the English coins were hand-hammered.
- g) In Sylvester Crosby’s book, *The Early Coins of America*, on the plate that is after page 34, there are drawings made by the Massachusetts General Court on what they wanted the artwork of the first “N E” coins to be. This consisted of a script “N E” on one side, and the denomination: “XII,” “VI,” and “III” to show the pence valuation. (Twelve pence equal to the shilling.) This order was made by the General Court of Massachusetts in May of 1652. Because the edges of the coins had no defined artwork, they were “clipped” by dishonest people to “save a little money.” This was so prevalent that the General Court ordered a change in the design of the coins. This is shown on the plate following page 40 of Crosby’s work. Four rather scrambled attempts to draw what they wanted the legends of the coins to be are presented. It is telling that they all have abbreviated (or illegible) renderings of the words: “Massachusetts,” “in”, and “New England” present. There simply was no space to put the total phrase onto the allotted circular space of the coin. I propose that John Hull (Massachusetts’s mint master) simply did not have enough space on the coin to spell out the “MASSACHUSETTS IN” on the coins. The legend might have barely fit (with very small letters) on the shilling, but there was no way it would fit on the sixpence and threepence.

To make the legally prescribed legends, Hull had to abbreviate as best he could. Abbreviated legends have an extremely rich background, particularly with the Roman coinage, and the English hammered coins certainly had many abbreviated legends. Starting with Massachusetts, he dropped the first “S” (with very little impact to the original word,) changed the “C” to a “T” possibly because he had no punch that would make a “C,” and then made a “U” out of a “V” (not uncommon at all, even today,) again because of the absence of a “U” type punch. These were Hull’s actions, and the General Court and everyone else didn’t have a problem with it. The “IN” was left alone, and the reverse had the full inscription. For all the “Tree” coins, “NEW ENGLAND” was always present in its entirety, in line with the importance of that phrase. Also “AN DOM” is an abbreviation for “Anno Domini.”

For the sixpence, the Tree side of the coin is the same as the shilling (consistency in coin art was extremely important at this time, so that an illiterate person could make out the denomination.) The reverse was further simplified by changing “AN DOM” to “ANO.” The three-pence substituted a small rosette for “IN” on the tree side, and also for “AN DOM” on the date side. Certainly, the fully spelled out legends were abbreviated for all coins out of necessity of legibility.

### **Variations in Minting Techniques**

The next aspect of the Tree shillings I'd like to discuss concerns all the Mass. Silver Coins. It is not uncommon for the edge of such a shilling to have a flange (raised piece of metal) at the edge of the coin, up to half the coin's diameter and orientated perpendicular to the coin's surface. This flange "sticks up" only on one side of the coin and is maximally about 1 to 2 millimeters thick and tall but can often be smaller.

I propose that this happened when the planchet was placed slightly off center on the fixed bottom die of the screw press and remained there when the top die (either hammered, rocker pressed, or screw connected) was driven down to stamp the coin. The planchet metal that was not covered by both dies would be forced off the edge of the dies and restrained in plastic flow by any part of the coin press. Note that no collar is needed for this effect, but it is likely that a collar of some sort was used on the Small Planchet Pine Tree Shillings. Such a collar would greatly help the person who placed the planchets onto the bottom die to make sure it was properly aligned. Such a collar would have a slightly greater diameter than the die, and it is in this space that the coin's flange would be formed.

If the planchet was placed "off center," directly opposite the flange the coin has a higher chance of having an incomplete strike, and usually the tops of the legend's letters would be missing. This does not happen often, however. If the planchet was too large for the dies, the edge flange would also occur due to plastic flow of the planchet's metal possibly here restrained by the press, if there was a "aligning" slot to the press (like the hypothesized collar on the screw press.) This effect is seen on all the denominations and types of Mass. Silver and lends "character" to the coin. Christopher Salmon, in his book: *The Silver Coins of Massachusetts* notes this phenomenon and gives a very good explanation of it. It does support the theories of how the various types were made.

### **Weight Distributions of Cut-Down Mass Shillings**

In my previous articles on Mass silver, I emphasized the current prevalence of Mass silver shillings cut down to sizes way too small to be passed as full weight. There are many I found that weighed about 50 grains, the weight of a Spanish Real being about 50 to 52 grains. The basic theme is that once the Mass Silver coinage left New England, it was solely a commodity and valued at the price of silver which was dictated by whatever colony it ended up in. I reexamined that hypothesis with a histogram of weight vs. number of occurrences of various groups of Mass Silver.

For the coins mentioned in Sydney Noe's book, *The Silver Coinage of Massachusetts*, very "tight" weight histograms prevailed, about an average of about 71 grains, with a standard deviation of about 1.5 grains max. among all the denominations. Not a surprise since 80 to 90 percent of the coins came from the T. James Clarke collection and the others from the finest cabinets of universities, antiquarian societies, and museums. These collectors could afford the finest of varieties and did happily buy them in the market obtaining the finest specimens. Note



that many “fully frosted” uncirculated Mass Silver exist that looks as flashy as a unc. Morgan Dollar!

There are two coin cutting techniques that were used to alter the coin’s value so it could easily be acceptable money. Mass Silver cut fractions meant to stay in New England were made by linear chisel cuts “halving” and “quartering”, like how the Spanish 8 real coins were treated. Several pieces from the shipwreck “Feversham” show this method of cutting. The other and more commonly found light weight coins are cut about the edges to maintain the roundness of the coin. A histogram was made for all the coins (43 total) at a C4 “Happening” in the Spring of 2008. Two “clumps” of weights were found; fourteen at 50 grains (standard deviation about 2 grains,) and another group (twelve coins) at about 45 grains (standard deviation of about 3 grains.) These represent the nominal weight of a Spanish Real (at about 50 grains,) and the English six-pence (at about 46 grains.) Another interesting grouping is at 65 grains (a total of 7 within a standard deviation of about 3 grains,) the lowest weight coin that had a good chance of passing as “full weight.”

This supports the hypothesis already put forward of New England coins being a simple silver commodity in any of the other colonies except in “New England”—which certainly was thought to be a larger place than simply Massachusetts.

### **Miscellaneous, but Interesting**

I think that Hull’s disdain for making the smaller denomination coins is very evident in the “workmanship” put into the coin. Finding small denominations with clear legends is very difficult. This was due to the nature of how the silver was given to Hull to coin, and how the coins were delivered to the customer. This transaction was done by weight, so that the exact weight of any one coin made only a small difference and allowed Hull to make coins with large weight tolerances. The three-pence’s vary greatly in weight, for instance. The shillings (by far the commonest of the Mass. Silver) have the best weight consistency, perhaps because they were most easily compared with a known “good” specimen, using a simple two-pan balance.

As the coins went through the rocker press, they “stretched” in the direction of the movement of the rockers, to various extents. This leads to odd-shaped coins. And since Hull used large scissors to cut the planchets out of the strip, one can have a diamond-shaped Oak Tree coin.

It is very nice to own Mass. Silver, but one does not need a lot of money to buy the books on the coins and use their very good photographic technique to learn more about them. It is the story the coins tell themselves that is the fascinating element of numismatics for me.



## THAT WHICH WAS ONCE LOST HAS NOW BEEN FOUND THE MARIS OBERSE 68 PLATE COIN

(Roger A. Moore, MD)

Collectors of the New Jersey colonial copper series have an understandable fascination with coins with a provenance that includes the father of New Jersey coppers, Edward Maris, MD. Coins used by Maris to make the heliotype plate of New Jersey varieties for his elephant-sized folio are therefore especially desirable.<sup>1</sup> Dennis Wierzba has for decades tried to keep track of the whereabouts of all Maris plate coins and he is missing the location for only a few that are presently lost to the collecting community.<sup>2</sup> One of these lost plate coins is the 68-w, whose obverse was used in Maris' book plate. The Maris reverse "w" on the plate is not actually the reverse of the 68 obverse coin but rather the reverse of the much rarer 69 obverse. It is known that on July 18, 1883, Maris wrote a letter to John Bull, a major collector of New Jersey coppers stating:

*"Friend Bull, I enclose a very scarce variety of the N.J. cent, – a 68-w. One of the best I have seen, in fact it is my old one that was used in the plate. I have procured one that in some respects I like better, but in other respects, not as well."*<sup>3</sup>

Therefore, the Maris 68 obverse plate coin was offered to Bull and it is highly likely that due to the variety's scarcity that it ended up in his collection. The 68-w that Maris bought to replace the one he used on his plate was sold at auction in 1886 with all of Maris' other New Jersey coins as a single lot.<sup>4</sup>

Bull died on November 20, 1922, and much of his New Jersey collection ended up in the collection of Henry Prescott Clark Beach. In turn Beach's New Jersey collection was sold to the coin dealer Henry Grünthal, though when this sale occurred is not documented. In 1945 Grünthal sold the combined Bull/Beach collection of New Jersey coppers to the American Numismatic Society and many of these coins at the ANS are still labeled Bull/Beach.<sup>5</sup> The 1945 ANS accession records indicate 220 New Jersey coins were acquired, while presently 131 of these coins still remain within the ANS collection.<sup>6</sup> On viewing the two 68-w varieties in the ANS holdings using the internet-based Mantis portal, it was evident that the plated Maris obverse 68 coin was not one

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<sup>1</sup> Edward Maris, *A Historical Sketch of the Coins of New Jersey*, Philadelphia, 1881. A heliotype plate is made by taking the negative of a photographed image of an item and exposing it to a thin layer of gelatin while the gelatin is chemically hardened. The printing of the actual picture or plate is then performed directly using the hardened piece of gelatin. One can understand how imperfections in the resultant printed images might occur.

<sup>2</sup> Email from Dennis Wierzba to author on December 18, 2005 and telephone communications between June and August of 2021.

<sup>3</sup> Roger Moore, "Edward Maris Related Communications with J. E. Bull and other Documents Containing Maris's Signature," *JEAN*, in publication.

<sup>4</sup> Stan V. Henkels & Co. auction of the Dr. Edward Maris Collection, June 6, 1886. Lots 350 to 500 comprised the Maris New Jersey collection and lot 481 was the 68-w that Maris bought to replace his 68-w used as his obverse plate coin. The entire collection of New Jersey coppers was purchased as a single lot through an agent by T. Harrison Garrett for \$550.

<sup>5</sup> Roger Moore, Maris Communications paper.

<sup>6</sup> Jesse Kraft, Assistant Curator of American Numismatics at ANS, communication with author in July 2021.

of these two coppers.<sup>7</sup> Explanations for the absence of the Maris 68 obverse plate coin at the ANS could be that Bull had not purchased the offered Maris coin or, if purchased by Bull, it might have been sold privately and not in the group sold to Beach. On the other hand, if it was part of the group of Bull's New Jerseys sold to Beach, which were then sold to Henry Grünthal, and finally sold to the ANS, it was most likely one of the 89 New Jersey coppers later de-accessed by the ANS as duplicates. Due to the relative low grade of the Maris plate obverse 68, one can understand why his particular coin, if unrecognized as a Maris plate coin, might be sold as a low grade duplicate.

The August 29, 2021, Early Cents Auction, had a series of New Jersey coppers that had been consigned by "Uncle Joe". Lot 175 was a New Jersey 68-w described as:

*"Sharpness F12 but covered with minor roughness on all but the highpoints, which are smooth. No verdigris but there are some old, light scratches hidden in the toning, clearest on the shield. Rather glossy dark olive brown with lighter brown toning on the highpoints. The bottom of the date is tight to the edge of the planchet but it is easily readable. The legends are easily readable as well but a few letters on the reverse are weak. Late die state with obvious swelling in the center of the obverse. Weight 137.3 grains."* (see Figure 1.)



Figure 1 – Obverse and reverse of Maris 68-w from auction.

One can see that the coin most likely rates a grade of only good to very good, though all the elements are visible. The author recognized some features of the coin that might indicate it was the long missing obverse 68 Maris plate coin. Close comparisons were made of the obverse of the auction coin with the 68 obverse plated in Maris' 1881 book. A photograph of the Maris obverse 68 made from an original Maris book plate is shown in Figure 2 next to the obverse of the auction coin for the sake of comparison.

<sup>7</sup> Internet access to the ANS collection in the Mantis database is provided to their two 68-w N.J. coppers at: <http://numismatics.org/search/results?q=fulltext%3ANew+Jersey+68-w>, respective accession #s 1931.58.528 and 1974.177.21.



Figure 2 – Comparison of Maris 68 obverses from the Maris plate photo (left) and the auction coin (right).

The author's first reaction was that the two looked different. Aside from the centering and position of the elements, the Maris-plate obverse looked less strongly struck. However, on further study it was the little things that made the argument for both images being the same coin. Figure 3 shows comparisons of the pits in the center of the horse's neck and the scratches on the forward part of the horse's neck.



Figure 3 – Comparison of the Maris Plate image with auction coin showing the same central pitting and the same scratches on the front of the horse's neck.



Similarly, the position of the dents in the letter C corresponded with one another (see Figure 4).



Figure 4 – Comparison of Maris Plate image with the auction coin letter C having a pit.

The combination of multiple small defects pointed to the two images being from the same coin. Though many of these defects are hard to see in the photograph of the Maris plate coin, they can be observed with close inspection. Very telling are the position and even the shape of the multiple small pits, such as the grouping of pits in the center of the horse's neck (Figure 3). The angulation and position of the deep scratches on the horse's neck and elsewhere are also the same for both images (Figure 3). Other substantiation is provided by the location of the pit in the letter C (Figure 4), the round dip in the surface under the letter C (seen best in Figure 1), and the small dip on the surface under the end of the plow beam. There are some differences in the two images, such as the spot in front of the second "A" in CAESAREA in the Maris plate photo which is missing on the auction coin. However, there are enough of the matching small defects that the author felt safe in saying that the two images were from the same coin. In order to try avoiding nearly inevitable owner bias, the images were sent to two New Jersey experts – Ray Williams and Dennis Wierzba – who also studied the images and came to the same conclusion as the author.

So why do the two images shown have a different general look, which is most likely the reason it remained unrecognized as a Maris plate coin for decades? The major differences in the gross appearance between the Maris plate photo and the auction coin are most likely due to the heliotype print of the Maris plate being washed out and not sharply focused. In addition different lighting angulations and intensities can play a major role in the final image produced. Maris used both electrotypes and actual coins to make his heliotype plate, but it is highly doubtful the 68-w used for the plate was an electrotype, since Maris used electrotypes mainly for coins he did not have available.<sup>8</sup> In any case the match of the small defects between images provides the positive identification that this newly acquired auction coin's obverse served as the obverse 68 on the plate for Maris's book.

The question remains: where has this coin been since Maris sold it to Bull in 1883? The sequence of Maris to Bull, Bull to Beach, Beach to Grünthal, and Grünthal to the American Numismatic Society in 1945 as outlined previously seems reasonable. A clue to the coin's whereabouts for at least part of the time was provided in the 2021 Early Cents Auction catalog where the provenance of the coin was provided as having been sold by the Stack's Auction house in 1975. Stack's auction catalog lists the collection's consigner as Robert J. Kissner. It is known

<sup>8</sup> Roger Moore and Dennis Wierzba, "The Maris Plates," *The Colonial Newsletter*, Consecutive Issue # 123, vol. 43, no. 2, August 2003, Sequential Page 2495.

that the New Jersey coppers in the auction were part of the collection of Damon Douglas, who had died the year before, and had been sold to either Kissner or to Stack's as a group.<sup>9</sup> Whether the sale occurred before or after Douglas' death is not documented. In either case, when these New Jersey coppers are discussed in condition census lists, their provenance is often recorded as Kissner/Douglas.<sup>10</sup> In the 1975 Stack's catalog it is evident that Damon Douglas' collection of New Jersey varieties was being referred to in the introduction of the section containing the New Jersey lots:

*"NOTE: The following magnificent collection of New Jersey coppers is the largest and most impressive group to be offered for Public Auction Sale since the Spiro Collection in 1955. Some varieties offered here did not appear in that sale nor in the Maris Sale of 1886. Rather than catalog these by dates, we have elected to use the numerical reference that Dr. Maris developed. This collection, which was about 40 years in the making, contains not only some very high rarities, but some items in duplicate...."*<sup>11</sup>

The lot description for the coin under discussion in the 1975 Stack's catalog was:

*1787 Maris 68-w. Rarity 5. This variety is almost always found well worn, and often poorly centered. The die is beginning to buckle in the center, but its details are clear. The reverse legend is weak but the shield clear. Medium brown. Very Good.*

One remaining question is when Damon Douglas got the 68-w from ANS. The first public auction of ANS duplicates was heralded as having occurred in 1984, and contained the duplicate Vermont coppers within the American Numismatic Society collection. The beginning of the Vermont Copper section of the catalog stated:

*"We are proud to offer the following important collection of Vermont Coppers. Virtually all the pieces are duplicates from the collection of the American Numismatic Society (ANS) in New York City. ... To our knowledge this is the first time that the ANS has granted the privilege of selling duplicates from their collection of US coins to an auction house, and we are justifiably proud and grateful to have been granted this singular honor."*<sup>12</sup>

If this was the first public auction of ANS duplicates and the 68-w was sold in the 1975 Stack's auction, then the only way the 68-w copper might have left the ANS would have been through a private sale or trade. Damon Douglas and his wife were very active in New York numismatics and it would be logical to assume if the ANS were selling duplicates of coins he

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<sup>9</sup> Bowers and Merena Auction, The Spring Quartette Sale, Henry Garrett Collection of New Jersey Coppers, March 26, 1992, cataloged by Michael Hodder- Cataloger note under lot 1314 which is New Jersey variety 15-u states, "The New Jersey coppers included in Stack's sale of the Kissner Collection were purchased from Damon Douglas, and were consigned *en masse* to the Stack's sale. The present cataloguer prefers to refer to this collection as the Douglas, rather than the Kissner Sale, when describing the New Jersey coppers included in it." A big "Thank You" goes to Jack Howes for directing the author to this information.

<sup>10</sup> Both John Griffie and Ray Williams in writing up the Condition Census date for each New Jersey variety in *Penny-Wise* between 1990 and 2003 listed many of the 1975 Stack's sale New Jersey coins' providences as Kissner/Douglas.

<sup>11</sup> Stack's 6/27/1975, lot 174.

<sup>12</sup> Mid-American Rare Coin Auctions, *The Bluegrass Collection*, May 18, 1984.

collected, he would have been at the head of the line to purchase them.<sup>13</sup> Jesse Kraft, the Assistant Curator of American Numismatics at ANS, has endeavored to find any deaccession records that would indicate when the New Jersey duplicates were sold. The records are centralized from 1964 to 1975 and did not show any sale of the New Jersey coppers. Records between 1954 and 1964 are less complete but also did not show any sale of duplicate New Jerseys. Pre-1954 records are not centralized and trying to retrieve information from them would be similar to searching for a needle in a haystack. A major acknowledgement needs to be given to Jesse Kraft for having tried to wade through as much paper work as he did! Though we do not know the exact date that Damon Douglas acquired the Maris 68-w, assuming it had resided at ANS, we can presume it was sometime between 1945 and 1954.

The last question that remains unanswered is who bought the coin when it was sold by Stack's in 1975. "Uncle Joe" is listed as the consigner in the 2021 Early Cents Auction catalog and the lot providence indicates the coin was bought at the 1975 Stack's Auction, so we can safely presume "Uncle Joe" purchased the 68-w in that auction. The mystery is the identity of "Uncle Joe." Is anyone willing to step forward and admit to being "Uncle Joe" so that the providence chain can be completed? At least we now know that two old time New Jersey collectors had the variety 68-w that Maris had used the obverse for on his book plates secured in their collections for decades while New Jersey collectors wondered where the heck it might be.



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<sup>13</sup> In 1943 Damon Douglas became a fellow of the American Numismatic Society and served on a committee within the ANS for United States coins. Between 1949 and 1951 he served as president of the New York Numismatic Club. He was a remarkable researcher with a passion for New Jersey coppers and Fugio cents. His unpublished studies of New Jersey coppers were edited by Gary Trudgen and published, *The Copper Coinage of the State of New Jersey – Annotated Manuscript of Damon G. Douglas*, The American Numismatic Society, New York, 2003. This author was honored to be one of the numismatists asked to provide editorial comments within the book.

## THOUGHTS ON CONNECTICUT COPPER AFRICAN HEADS NEW HAVEN MINT MADE?

(Randy Clark)

The question has been raised which asks if the two 1785-dated "African Head" Connecticut coppers are actually official mint products from New Haven, or were they made by another, unauthorized operation. The premise is raised since "both [African Heads, 1785 varieties 4.1-F.4 and 4.2-F.6] are dramatically different in style [from other varieties], and both are only singleton varieties, paired with just one reverse, which seems very atypical for the series. Why couldn't these be counterfeits, even at authorized weights?"

So, keeping an open mind (and knowing we will never know for sure) let's look at the African Heads, and related varieties, to see what evidence there is, one way or the other.

### **History of the African Head Moniker**

The term "African Head," and other early descriptions replacing "African" with even less appropriate labels, originated in the 1850s to 1870s as citations in Dickeson (1859), Crosby (1875) and various auction catalogs. Dickeson, in 1859, associated the nickname with two 1787-dated, bust-left obverses (Dickeson types 9 and 10,) described as "being familiarly known as the 'Africanus, or negro head.' " However, contemporary 1860-1870 auction catalogs used the term loosely in association with 1785-dated varieties (without enough descriptive detail to definitively know which ones.) For instance, the March 1863 Bangs Henry A. Smith sale described lot 639 as follows: "1785. A variety of the African style of head to right, well preserved and rare." Crosby, in 1875, officially shifted the nickname to a 1785-dated obverse 4 pairing, stating, "One die of No. 4, is the 'African Head' – a large head with wreath of six leaves [Plate V. No. 5.]" Crosby's plate illustrates the 1785-dated obverse 4. Dr. Thomas Hall, in his personal notes circa 1890, further clarifies the varieties as 4.1-F.4 and 4.2-F.4 (the latter subsequently revised to 4.2-F.6.)

Many of these references were made during the Civil War era, and were likely the imposition of current events and opinions on the presumed intent of the coiners, nearly a century before. There was a small African-American population in 1780s New England, and New Haven County in particular, that would likely not have received attention from those attempting to create a local (non-British) spare change medium. In fact, it is known African-Americans worked at the mint (such as "Aaron" per the account books/ledgers<sup>1</sup>) and it is known that at least one mint petitioner owned slaves [Joseph Hopkins, who freed his slaves in his will.] There is a *CNL* article about this topic by Christopher McDowell.<sup>2</sup> The point here is that assigning a cultural reference in the 1860s to coins made in the 1780s is sketchy, at best. Prior to the 2021 publication of *The Identification and Classification of Connecticut Coppers*,

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<sup>1</sup> Randy Clark and Christopher McDowell, "Transcript of the 1788 Conn. & Fed. Mint Account Book," *CNL*, No.163 April 2017, pp. 4451-69.

<sup>2</sup> Christopher R. McDowell, "Slavery and Child Labor at the Connecticut Mint," *CNL*, No. 163, April 2017, pp. 4530-36.



discussions were held about replacing the label "African Head," but it was felt the description was benign enough, and established enough, to carry forward.

Instead, let's look at the features that potentially differentiate these Connecticut coppers from others of the same year. Consider the hair style - the direction in which the hair is groomed - and the facial shapes of cheeks, lips, nose and eyes. Let's investigate obverse bust embellishments, reverse effigy details and legend/ornamentation. The more common African Head, 4.1-F.4, is the only 1785-dated, rarity-one (R1, common) Connecticut copper, which means the 4.1-F.4 is the single most populous variety for that year – a factor to consider in deciding its legitimacy. The more rare, *second* African Head, 4.2-F.6, is one of several rarity-eight (R8, extremely rare) rated 1785-dated varieties.

### **What Attributes Are We Looking For?**

How does one conclude whether any die was cut, or a variety struck, at an authorized Connecticut mint, or “counterfeited” at one of several unauthorized mints? The years 1785-1786 were transition years for the New Haven area mint, which saw low volume production, mint processes that were underperforming and dies that were going through stylistic and robustness transition. To conclude that African Heads were not from New Haven, we need to see something “out-of-the-norm” compared to what are considered authorized pieces.

The question being posed mentioned that the “style” of the African Heads appears different from other Connecticut coppers, but style encompasses many things - artistry, physical layout, legend, ornamentation, effigy detail and relief, quality of engraving and manufacture - what some might call the “metal,” or overall look-and-feel of a coin. Other, more tangible, differentiators are coin size (diameter, thickness), weight, metrology (metal composition, surface morphology) and traceable stylistic similarity with coins from known unauthorized mints (punches, specific style cues, etc.) And, of course, one would need to consider what alternative minting locations had the skill, scale, motivation and distribution channel to produce and circulate Connecticut coppers in high volume.

The question will also arise how to confirm the date of actual manufacture, as back-dating of struck coppers was fairly common in several Confederation-era mints. How do we know African Heads were produced in 1785? We can put that question to bed here because there is a 1785-dated Vermont Ryder 3 “Landscape Copper” known to be struck over a 1785-dated African Head 4.1-F.4 (see the Stacks-Bowers *E Pluribus Unum* sale of November 2020, lot 4194 and its earlier appearance in *The Colonial Newsletter* October 1979, p.701.) Since it is widely understood that 1785-dated Vermont landscape coppers were struck in 1785 (or early 1786,) it must be similarly concluded that the 4.1-F.4 African Heads were struck even earlier. Hence, this analysis will focus on African Heads and their 1785-dated Connecticut copper peers.

### **Obverse Style Comparison**

At first glance, the African Head obverses 4.1 and 4.2 do appear different in style from other 1785-dated Connecticut coppers – with the possible exception of obverse 6.5. However, there are subtle features shared with other 1785 "intricate detail" obverses, such as 6.3 and others (see Figure 1.)

It should be noted that Dr. Thomas Hall, on December 9, 1899 in his unpublished, handwritten manuscript, suspected the 6.5-M variety as being of potentially European origin and thus the archetype for the Connecticut coppers series; he wrote, "This scarce piece is of good workmanship and worthy of careful observation. Possibly this die, with others of the same date, may have been struck in England and used for patterns for this issue." Variety 6.5-M also shares features with 6.3-G.1/G.2, as well as the African Heads 4.1-F.4 and 4.2-F.6. Before a conclusion is drawn, we need to study several dies.

Obverses 4.1, 4.2, 6.3 and 6.5 all share a similar coarse hair style/direction, pursed lips, long ribbon ends and highly detailed mail/breast features. The ribbon ends on varieties 6.5 and 6.3 are the only ones long enough to be placed adjacent to the A in AUCTORI (see below.) This takes away from peripheral area usable for the legend, so the assumption is obverses 6.5 and 6.3 were among the earliest of Connecticut's dies. Correcting this, African Head obverses 4.1 and 4.2 have ribbon end length and placement consistent with all other 1785 MBR (mailed bust right) varieties, allowing more room for spreading out AUCTORI in the legend (which now extends completely from shoulder to head.)

Embellishment of the mail and breast features are quite extensive on African Head obverses 4.1, 4.2 as well as 6.5 and 6.3, but this might be expected of early Connecticut mint dies, before the demands of high-volume production made such details impractical. It is possible that only the original "presentation" dies were made by someone as skilled as Abel Buell, and construction of the more numerous production dies were later handed off to apprentices, journeymen or other engravers.



Figure 1: Example Intricate 1785 Obverses



Figure 1 (Continued): Example Intricate 1785 Obverses

The shoulder details on obverses 6.5, 4.1 and 4.2 are very similar, having a wide arc with no inner detail (see Figure 2) and a segmented pattern above. However, the 6.3 obverse bust is similar in dimensions with the 4.1 obverse, but it has the wide arc filled with detail not seen on any other variety (correspondingly, the reverse G.1 die has the globe filled with similar detail not seen on any other variety.) Due to the embellishments seen on obverses 6.5, 4.1, 4.2 and 6.3, it is believed all of these are early dies were designed to get the mint off the ground and approved through legislation (and to impress the citizenry with the quality of its initial release.) Replicating this much aesthetic detail in subsequent production dies would have placed an undue burden on the die-makers, after the coinage was approved and in circulation, and would have been unnecessary.

Formation of the legend letters does differ between these varieties. Many of the legend characters (punches?) used on obverses 4.1, 4.2 and 6.5 appear unique to those varieties (A with a wide left riser, C with a serif on the bottom, tall letters T/R/I/E all appear to have been made with a tall I punch, the O appears to have been impressed with two strikes of a C punch, and the thin U has equal risers.) Obverse 6.3 uses hand-cut characters with some similarities and some differences (A with wide right riser, U with a wide left riser, C with a serif on the bottom.) Then, possibly starting with obverses 2 and 6.1, a new set of punches is employed that were used on the majority of the 1785-dated production dies (see Figure 3.)



Only obverses 6.3 and 1 (a rework of 6.3) appear to have hand cut legends. One might expect a bit of experimentation in 1785 on punches, as the mint tried to settle on a long term solution. Having a different set of punches may not be an indicator of non-New Haven usage – being more of an evolution in legend character details than a revolution (i.e. a counterfeit or other unauthorized origin.)



**From Top:** 4.1, 4.2, 6.5, 6.3, 6.1, 2

**From Top:** 6.5, 4.1, 4.2, 6.3

Figure 2: Legend and Mail Details on Intricate 1785 Obverses



Obverse 3.2

Obverse 3.4

Obverse 6.4

Figure 3: Example 1785 Obverse "Production Dies"



### **Obverse Conclusions**

There are style linkages, be they punch or bust adornment, between obverses 4.1, 4.2, 6.3 and 6.5 such that if one were to conclude the African Heads were unauthorized, one would have to also conclude the 6.3 and 6.5 were, as well. Obverses 2 and 6.1 appear to have style similarities with the African Heads, as well, in the ribbon ends and legend placement, despite the fact they do not share punches. Obverses 2 and 6.1 are then legend punch linked to most other 1785-dated obverses. I interpret these factors as evolution of style, not the separate and independent style that one would expect if African Heads were produced in an isolated mint. One must keep in mind, however, that die similarities, or dissimilarities, do not necessarily indicate any specific minting location.

### **Reverse Style Comparison**

The 1785-dated reverses 4.1-F.4, 4.2-F.6 share similarities with the reverse shared with 2-A.1 and 6.1-A.1, including the date (the number eight in the date crossing bottom left to upper right is very rare in Connecticut coppers), globe with no lines and proximity of INDE with the branch hand (close.) The reverses 4.1-F.4 and 4.2-F.6 also share features with reverse 6.5-M, in terms of central figure and shield style. Reverse 6.5-M in turn shares features with reverses 6.3-G.1 and 6.3-G.2, in terms of the date and distance of INDE from the branch hand.



Reverse F.4



Reverse M



Reverse A.1

Figure 4: Example 1785 Reverses



Upper: F.4 Reverse, Lower: A.1 Reverse

Upper: G.1 Reverse, Lower: M Reverse

Figure 5: Example 1785 Intricate Reverse Date Details



Reverse G.1

Reverse M

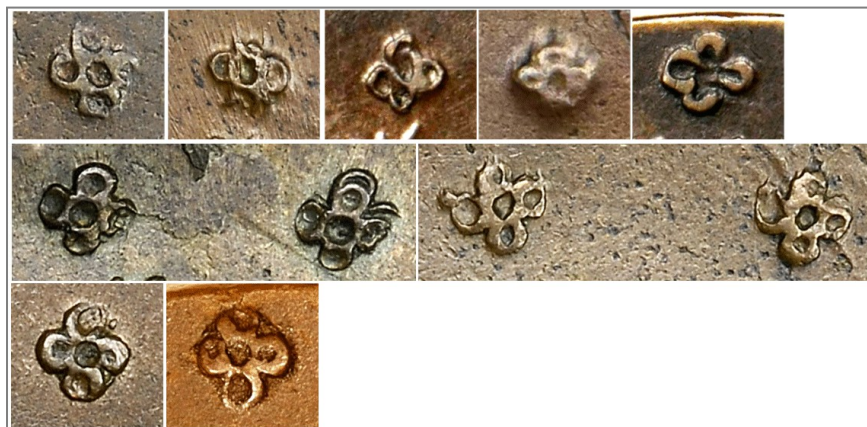
Reverse F.2

Figure 6: More Example 1785 Reverses

Globe detail is excessive on reverse G.1, showing a mass of dots in the place of an unfeathered round or globe lines. The 6.3 obverse has a similar amount of attention paid to portions of the shoulder mail. This amount of detail would not be expected on a production die, but variety 1785 6.3-G.1 is an R3 rarity. While it was used in high volume, these subtle embellishments very rarely strike up. And when reworked into reverse G.2, they disappear entirely.



Many of the legend characters (punches) used on reverses F.4, F.6 and M appear unique to those varieties (tall letters I/D/E/L/B appear to have all been made with an I punch.) Similar with the earlier obverse discussion, reverse G.1 uses hand-supplemented characters (based on what appears to be an I punch for letters I/D/E/T/L/B.) Then, possibly starting with reverses A.1 and F.2, a new set of punches is employed for the majority of 1785-dated production dies, although the practice of making L's (and possibly T's) from I's continued.



Top Row: Reverses F.1, F.2, F.3, F.4, F.5    Middle Row: Reverses G.1, G.2,    Bottom Row: Reverse M (two positions)

Figure 7: Example 1785 Reverse Quatrefoil Ornaments

The quatrefoil ornaments of reverses F, G and M do not always have the uniformity of a punch, yet have enough similarity that they may have started that way and finished with hand embellished. Reverses F.1, G.1 and M may be from the same punch, with a one broken lobe. The deep depth of the reverse F.4 punch is unusual and almost never shows any detail in coin impressions.



Reverse L

Reverse I

Reverse F.5

Figure 8: Example Reverse "Production Dies"

Face and head details do not seem like a productive avenue to pursue in an attempt to differentiate details between dies. If one searches long and hard, you can find a few common African Head specimens where facial details can be found, but it is not clear how much of that detail is intentional (eyes, nose, mouth, hair puff) vs. incidental (i.e. the hair.) However, it is noted the African Head reverse effigy is looking upward, which is not seen on any other 1785-

dated reverses where the figures are looking laterally to the left (including the production dies.) While many Machin's Mills coins have reverse effigies looking upward, it is not considered a significant observation on 1785-dated Connecticut coppers.



Top Row: Reverse 4.1-F.4, Middle Row: Reverse 6.3-G.1, Bottom Row: Reverse 6.5-M

Figure 9: Example Reverse Effigy Head Details



Top Row: Reverse 4.1-F.4, Reverse 4.2-F.6, Reverse 6.5-M / Buell's c. 1774 Yale Diploma Engraving,  
Middle Row: Reverse 6.3-G.1, Reverse 6.3-G.2, Reverse 2-A.1 / Buell's c. 1784 Connecticut State Seal/Arms  
Bottom Row: Reverse 3.1-A.3, Reverse 3.3-F.3, Reverse 4.4-C / Cartouche from c. 1784 *Map of the United States*

Figure 10: Example Reverse Shield Details



Note the stylistic shift in grapevine direction between dies, implying a different hand may have been doing the engraving. The 1784 Connecticut state seal (arms) can be found in multiple variations, with vines rooted only to the left of the support pole or with vines rooted to both left and right of the support pole, suggesting there was no official orientation. Reverse F.4, M, G.1/G.2 and A.1 grapevines all are rooted to the left of the pole but the rest of the 1785-dated reverses appear rooted to the right, as does Abel Buell's *New and Correct Map* cartouche. It would be interesting to study if the vine rooting direction cut into the die indicated the preference of a left- vs. right-handed die engraver versus a random assignment or an unauthorized mint.

As a side-note, all 1784-era official Connecticut state seals consistently show two vines high and one low, as does Buell's map cartouche. There is good reason for this, as Lawrence Wroth, in his biography *Abel Buell of Connecticut*,<sup>3</sup> believed that Buell was paid £2 by the state in 1784 for engraving the Connecticut State Seal (Arms) plates (illustrated above.) It is curious that all Connecticut copper reverses with grapevines on the shield (except 1787 reverse F) inverted the design - as seen in Buell's c. 1774 Yale Diploma engraving.

Note also that globe lines, missing on reverses A.1, F.4, F.6, G.1/G.2/E and M, are later found on production dies for reverses A.2, A.3, B, D, F.1, F.2, F.3, F.5, I, L and K. Perhaps their inclusion improved the look of a reverse when a shallower globe was cut in the die, as the relief of production dies was reduced from earlier representatives (F.4 and M were higher relief compared to most other dies.)

### **Reverse Conclusions**

Some of the African Head F.4 reverse features are different from other dies used in 1785; some others are not. The date is similar to A.1. Other styles are similar to G.1 and M. Is it different enough to be considered an unauthorized mint product? Or is it just a different engraver or an early die design? Let's see what else there is to consider.

### **Weight Distributions**

The 1785-dated varieties 4.1-F.4, 4.2-F.6 are in agreement with the weight of other 1785-dated varieties, as shown in the chart below. One would expect illegitimate or counterfeit variants to fall outside the production distribution, if for no other reason than a different place of manufacture.

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<sup>3</sup> Lawrence C. Wroth, *Abel Buell of Connecticut*, Acorn Club, 1926, pp. 61-63.

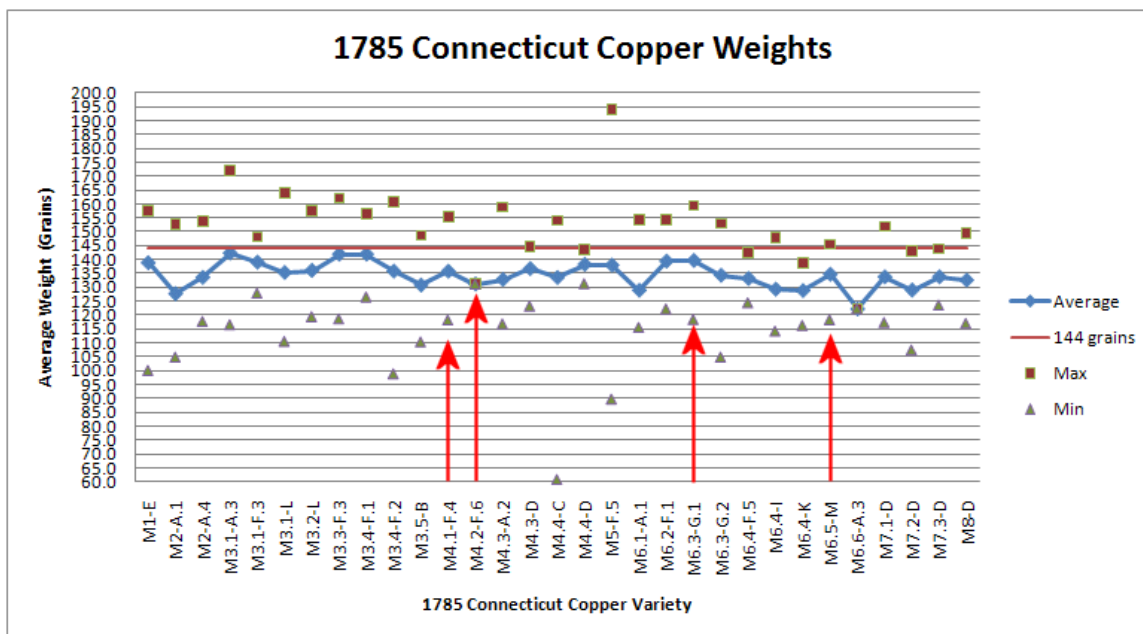


Figure 11: 1785-Dated Variety Weight Comparison

### Diameter Distributions

*Caution: Very small sample sizes are found in the ANS Barnsley database, used for this analysis (measured to 0.1 mm precision.) But the limited data available can assist in this discussion.* The 1785-dated variety 4.1-F.4 is in agreement with most other 1785-dated varieties, as shown in the chart below of average diameters (mm.) Interestingly, the 1785 2-A.1 and 2-A.4 stand out as consistently larger diameter, in this limited database. The planchet cutter, thickness and striking pressure all contribute to final diameter.

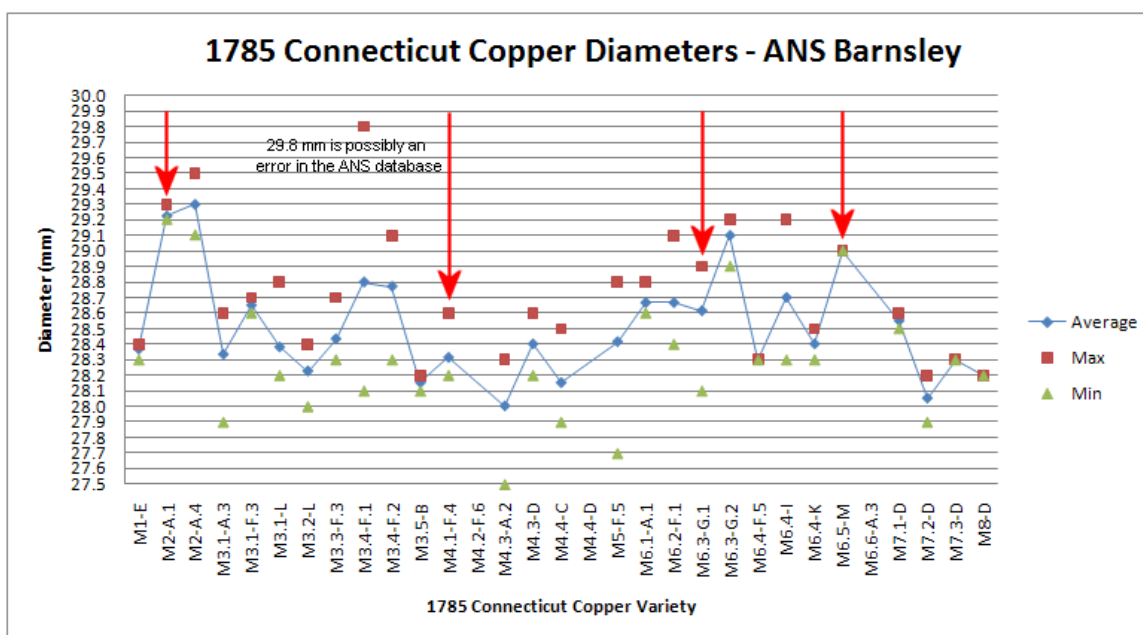


Figure 12: 1785-Dated Variety Diameter Comparison

### Rarity Ratings

The 1785-dated variety 4.1-F.4 is the sole Rarity 1 rated (common) die combination, with the 6.3-G.1 coming in as a Rarity 3 (mid-rarity.) The reworked variants of 6.3-G.1 (i.e., 6.3-G.2 and 1-E) and are R4 and R5, respectively. And the 6.5-M is a Rarity 6 (very rare.)

To say the common African Head, and its cousins 6.3-G.1 and 6.5-M, were all counterfeits would imply that a significant percentage of 1785-dated coppers were illegitimate, which is difficult to accept. The timing does not work out - in terms of production capability at other mints. African Head 4.1-F.4 is a rarity one (R1) which means high volume production (assuming survival rates for early coppers are similar.) None of the alternative mints had that kind of established capability in 1785. Not Vermont, as there are no R1 rarity 1785- or 1786-dated Vermont coppers. While the "Brewery Mint" in the New York City area was believed potentially capable of such volume, their focus in 1785 was on counterfeit British halfpence and a possible federal coinage contract.<sup>4</sup> New Jersey, Massachusetts and Machin's Mills mints were not yet operating.

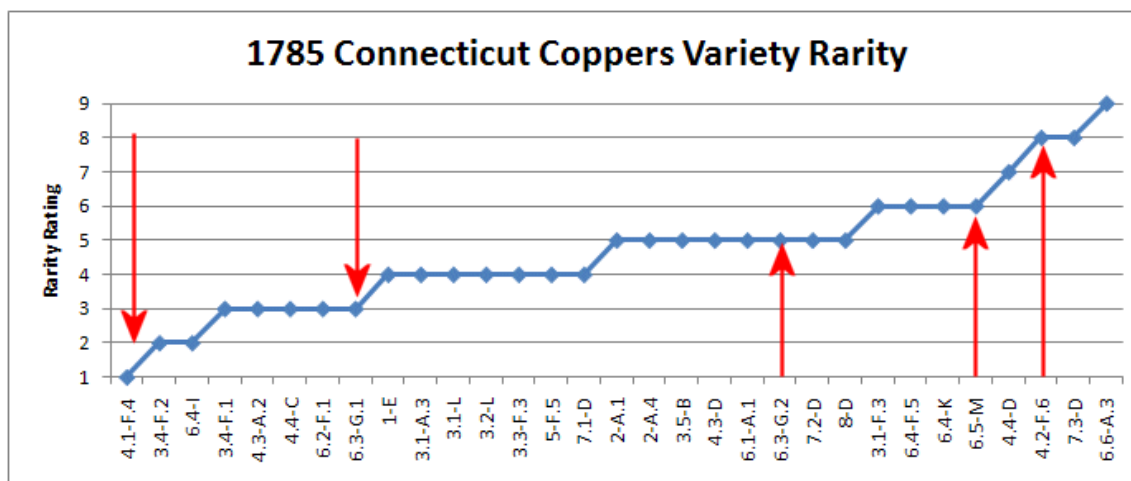


Figure 13: 1785-Dated Connecticut Copper Rarity, Sorted by Rarity

### Overall Conclusion

Admittedly, we will never know for sure where and when African Head Connecticut coppers were produced. This author's belief is that the earliest "presentation" dies prepared for Connecticut coppers were given extensive detail to impress prospective supporters, both financial and legislative. These included the obverses and reverses of varieties 4.1-F.4 (African Head), 6.5-M and 6.3-G.1.

Weights and diameters of these varieties are within the norm for 1785-dated Connecticut coppers. The common African Head, 4.1-F.4, is the only R1 rarity variety in 1785. Right behind that are R2 production varieties 3.4-F.2 and 6.4-I. Then come 6.3-G.1, another early

<sup>4</sup> Per a private communication with Gary Trudgen, August 2021.

die variety, and others as R3 rarities; next follow the rest of the production dies. Varieties 6.5-M and 4.2-F.6 are much rarer, presumably because the dies failed early.

African Heads 4.1-F.4 and 4.2-F.6 are each paired with only one obverse and reverse, but this is also true for 6.5-M. Other 1785-dated varieties 1-E (a rework of 6.3-G.2) and 3.5-B (a rework of 3.2-L, which is later reworked into 4.4-C) appear paired with only one obverse and reverse, but are part of rework clusters.

One assumes the most skilled engraver would be assigned the task of making presentation dies, and the presumption is that would have been Abel Buell (although there is no evidence supporting that presumption.) This author's personal guess is the 1785 6.5-M shows the kind of detail and flourish that appears consistent with Buell's Yale diploma engraving and the *New and Correct Map of the United States* cartouche (a failing being the poor reverse effigy facial details, but it is expected since working with die steel is more difficult than copper plate engraving, on fine features.) In 1958, Lawrence C. Wroth, in his biography *Abel Buell of Connecticut*, ventured the opinion, "The fact that some 350 variations have been counted suggests that others besides Buell had responsible access to the dies from which the coins were stamped. We can be reasonably sure, however, that the first of the coins issued in the beginning year of 1785 was of Buell's creation."<sup>5</sup>



1785 6.5-M Reverse Shield



Flourish Detail from Buell's c. 1774 Yale Diploma Engraving

Figure 14: Reverse M Shield Scrollwork Comparison to Known Abel Buell Artwork

It is very likely several die proposals were made for review and approval by the mint partners, and possibly members of the legislature. Afterwards, these reference dies may have been given to other engravers for replication into numerous production-grade dies, where die details would be less important than the ability to strike the design up (given the variations in planchets and stamping capabilities expected with high volume.)

Hence, it is my conclusion that the African Heads are not different enough from the rest of Connecticut's 1785-dated varieties that I would attribute their production to an unauthorized minting location.



<sup>5</sup> Lawrence C. Wroth, *Abel Buell of Connecticut*, Wesleyan University Press, 1958, pp. 82-83.



## A TECHNICAL OVERVIEW OF PRE-FEDERAL MINTING PROCESSES

(Craig Sholley)

Shortly after joining C4, I had the very good fortune to meet Jim Rosen via an email discussion of certain defects on pre-federal coppers. After explaining some of the technical issues I had learned as a manufacturing engineer in the metals-working industry, Jim suggested we co-author an article on the minting processes of this period. As we considered the points we needed to present, it became readily apparent that combining a general discussion with a more technical one would result in an article so long that it would need to be broken into parts. We then hit upon the idea of Jim writing a general overview of the processes and how they affect the appearance of pre-federal coppers followed by a piece covering some key technical points, hence the present article.

As Jim noted in his article, the major challenge to discovering the historical minting methods is the lack of records describing the operations at these early mints. The only direct sources we have are the recollections of Thomas Machin, Jr.<sup>1</sup> describing the operations at his father's mint along with the Massachusetts state records concerning its coining operation and a partial account book for the coppers struck by James Jarvis' company.<sup>2</sup>

Fortunately, the situation isn't nearly as dire as circumstances suggest. There are a number of period technical journals and other texts that can be combined with Machin's recollections and Jarvis' account book to provide a pretty clear view. While this may seem to be stretching the point, it most definitely is not. The period texts match up quite nicely to both Machin's recollections and the account book. This close correlation should really come as no surprise. Those involved in the early mints were highly accomplished mechanics and the only way to keep abreast of new equipment and processes was to read the journals of the day.

Modern chemical, mechanical, and metallurgical references can also be used to fill in some gaps. While most of the underlying principles of chemistry, mechanics, and physics were not understood at the time, they were still the same in the 1780's as they are today.

It is also important to note that simply because the early minters did not understand the chemical and physical changes taking place in metal as they forged, rolled, annealed, and tempered it does not mean that they made quality coins by mistake. On the contrary, the empirical knowledge of how to work metals passed down over literally millennia worked quite well.

In fact, a sort of "empirical knowledge" is still used today. Visit some of the knife-making forums on the web and you'll find that many of the makers don't understand the underlying principles. They simply know that if steel is heated to the proper temperatures for the proper time, they get nice, fine-grained, easily-forged steel that hardens and tempers into high quality knives that bring hundreds and thousands of dollars. This modern example of "learned knowledge" clearly shows that the early minters did not need to know the "why," they simply needed to follow the passed-down knowledge of "how to."

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<sup>1</sup> Jack Howes, James Rosen, Gary Trudgen. *The History and Coinage of Machin's Mills*. 2000. pg. 61.

<sup>2</sup> Randy Clark and Christopher McDowell, "Transcript of the 1788 Connecticut and Federal Mint Account Book," *The Colonial Newsletter*, No. 163, pp. 4541 – 4569.

## Rolling Copper Strip

The development of rolling mills in both the colonies and for many years after the Revolution was significantly impeded by the British 1750 “Iron Act.” That act prohibited the erecting in the colonies any rolling, slitting, or hammering mills, any furnace for making steel along with the exportation of any machinery or tools for those purposes.<sup>3</sup>

While the prohibitions were difficult to enforce and often ignored, they did suppress development of mills and steel furnaces in the US through the 1830s. Consequently, rolling mills and rollers-made in the US were not of the best quality resulting in copper strip that was often uneven and heavily marked from rough, worn, and warped rollers.

We unfortunately don’t have much information on the design and appearance of these early mills aside from that presented in Diderot’s encyclopedia from the 1750’s, Samuel Thompson’s 1783 “*An Essay on Coining*,” and the photographs and woodcuts of early mills in Denis Cooper’s 1988 “*The Art and Craft of Coinmaking*.” Since the photographs and woodcuts of hand-cranked, waterwheel, horse-powered mills in Cooper correspond quite nicely to those shown in Thompson, I’ll use Thompson’s as general illustrations.

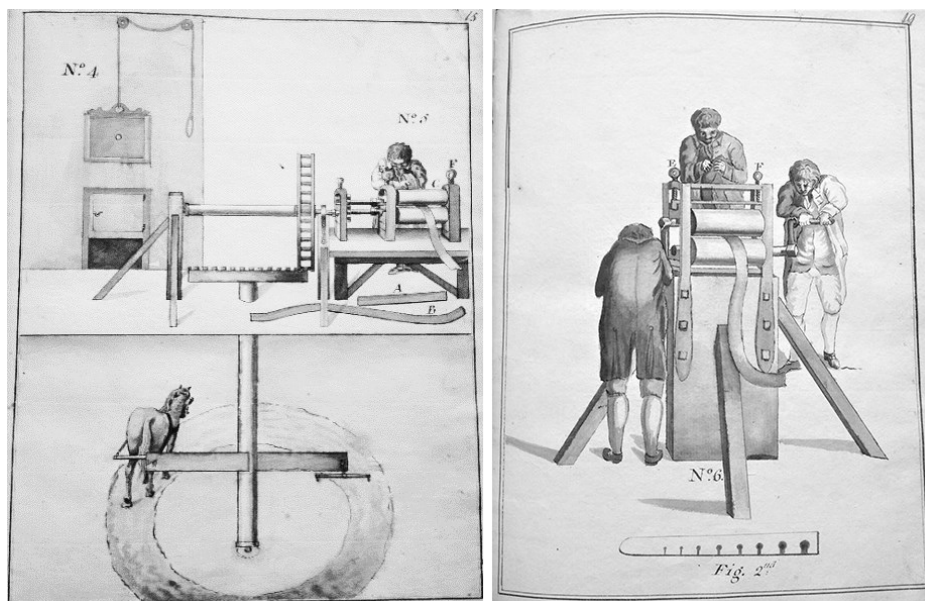


Figure 1. Thompson's horse-powered rolling mill, left, and manual rolling mill, right.

The recollections of Thomas Machin, Jr.<sup>4</sup> along with documents from Jarvis & Co. and those involved with the New Jersey<sup>5</sup> and Massachusetts coppers show that, at the very least, those firms had rolling mills and were rolling their own strip. It seems likely that all but the smallest coining operations

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<sup>3</sup> James Moore Swank. *History of the Manufacture of Iron in All Ages*. 1884. pp. 357 – 367. Swank also discusses subsequent acts preventing the exportation of any iron or steelworker and, any machinery or tools. There was, of course smuggling, sometimes successful and sometimes not. Export licenses were granted to the US Mint to permit the purchase of rollers in 1798 and in 1817 for a rolling mill.

<sup>4</sup> Howes, Rosen, Trudgen, 61.

<sup>5</sup> Roger Siboni, John Howes, A. Buell Ish, *New Jersey State Coppers*, pp. 35 & 561.

had rolling mills and even the small mints likely had hand-driven “finishing mills” to roll the strip to planchet thickness.

One interesting point in the period records is the use of the term “plating” in the Jarvis & Co. account book<sup>6</sup> and the Massachusetts House of Representative records on coining.<sup>7</sup> “Plating” is an archaic term originally meaning to hammer or beat metal into a plate, typically with a trip-hammer. However, since records of the Massachusetts minting operation show the “plating mill” included rolling mills, by the 1780’s “plating” was being used as a generic term for manufacturing strip or plate by any means.<sup>8</sup>

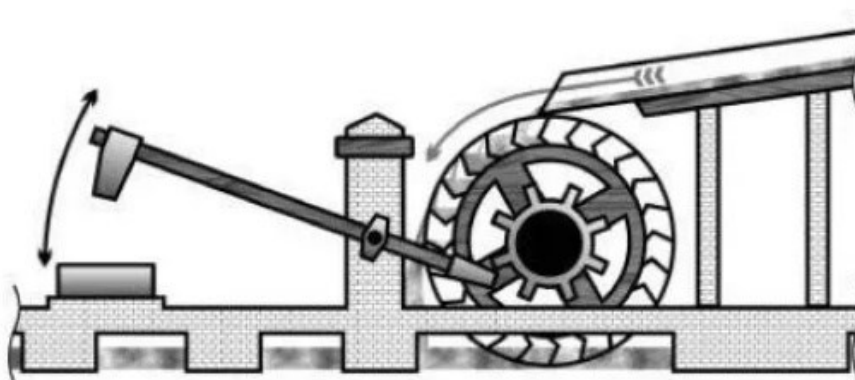


Figure 2. Water-wheel driven trip-hammer.

Off-center Massachusetts, Connecticut, and Fugio coppers support the planchet strip being rolled rather than hammered as the unstruck areas show surfaces that are relatively smooth and even. While the extant records and off-center pieces show that trip-hammers were not used to produce the strip, they still would have been particularly useful for reducing heavy ingot to a thickness suitable for rolling and for swaging (hammering) the end of an ingot or partially rolled strip so that it could pass between rollers to start the rolling operation.

A minor, but interesting point, at least from a manufacturing perspective, is that none of the pre-federal mints appear to have “hot-rolled” strip rather than the typical “cold-rolling” at room temperature. As the term implies, hot-rolling is rolling the metal while it’s hot.

To hot-roll, the copper would be heated to a “red-heat” to keep it above the annealing temperature while rolling. This prevents the copper from work-hardening thus eliminating the need to anneal and water-cool the strip every pass or two.<sup>9</sup> Hot-rolling also allows a greater “squeeze” so the copper can be reduced to planchet thickness with fewer “passes” than cold-rolling.

While hot-rolling does significantly reduce the time and labor required to roll strip to planchet-thickness, it does have a few disadvantages. First, and foremost, it’s very hard on rollers and would

<sup>6</sup> Randy Clark and Christopher R. McDowell, “Transcript of the 1788 Connecticut and Federal Mint Account Book,” *The Colonial Newsletter*, No. 163, pg. 4543, entry showing John Blend for plating 1369 lbs. of copper.

<sup>7</sup> Sylvester Crosby, *The Early Coins of America*, pp. 233 & 270 – records of the Massachusetts House of Representatives and the General Court concerning state coining operations.

<sup>8</sup> Crosby, 270.

<sup>9</sup> Unlike steel, copper does not “quench harden,” so it can be rapidly cooled by plunging into cold water.

have been especially so on the rather crude iron rollers available at this time.<sup>10</sup> The heat would soften the rollers a bit causing them to wear more rapidly and the rollers could warp and crack if they were not periodically sprayed with water to prevent over-heating.

It may well be that the roller wear is the reason there is no mention of hot-rolling in any of the extant records. Machin Jr. does not mention it and none of the rolling mills used for the New Jersey or Massachusetts coppers are noted as being used for hot-rolling.

The account book of Jarvis & Co. casts even more doubt on the use of hot-rolling at that operation as the books show a rather slow through-put for the rolling operations.<sup>11</sup> For example, on March 1, 1788, John Blend was paid one pound, six pence for plating 1369 lbs. of copper. Similarly, on March 15, he was paid three pounds, six shillings, nine pence for plating 4454 lbs. Comparing those payments to other daily wages paid to him, that works out to about 4 ½ days for the 1369 lb. lot and almost 15 days for the 4454 lb. lot, or about 300 lbs. of rolled strip per day – far too slow if they had been hot-rolling.

Melting and casting of the copper ingots for rolling had a major impact on the appearance of the struck coins. Scrap copper was the most common source of copper for the pre-federal mints and that scrap had various surface and internal impurities in addition to having surface oxidation or outright corrosion. As a result, the smelting process required a lot of flux to help remove most of the impurities and float them to the surface of the melt.

Insufficient flux and/or the failure to stir the molten copper and skim off the oxides (slag) that floated to the surface resulted in ingots with areas of entrapped oxides called “slag inclusions.” Rolling turned those inclusions into elongated “stringers” of oxide both on the surface and within the strip. Since the slag is rather brittle and “glassy” at room temperature, it typically crushes out during rolling, leaving irregular and/or elongated voids in the strip and, thus, the struck coins.

Improper casting of the ingot can also cause voids on the struck coins. Pouring the molten metal too fast or into a mold with poor venting can cause entrapped air (blow-holes) in the ingot which likewise results in voids in the rolled strip and struck coins.



Figure 3. Planchet voids on a Connecticut copper, from the author's collection.

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<sup>10</sup> The British did make very fine polished cast steel rollers, but the government largely prohibited their export in order to maintain manufacturing dominance. Exceptions were granted for the sale of rolling mills to foreign national mints, including the US Mint in 1796 and 1817.

<sup>11</sup> Clark and McDowell, pp. 4541 – 4569.

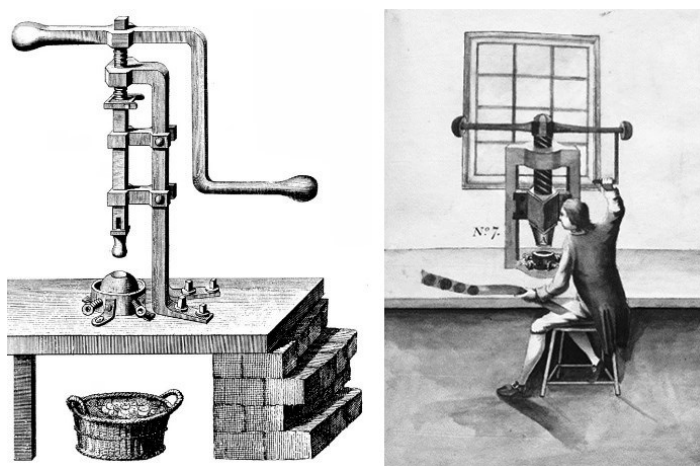


## Planchet Preparation

As with the rolling mills, we have no description or drawings of pre-federal planchet cutting presses, so the exact design is a matter of conjecture. Many authors use the illustration of the “single-leg” cutting press shown in Diderot. I prefer to use the “arch-frame” press shown in Thompson as it has three major advantages over a “single-leg” press.

First, the heavier frame and dual uprights of the arch-type press make it far stiffer and resistant to flex and cracking than the “single-leg” press. Second, the larger frame allows for a larger screw with faster threads, providing a significant increase in cutting power along with a faster action. Finally, the longer, heavier swing arm likewise provides an increase in power. It is difficult to believe that mechanics talented enough to set-up a functioning mint would not recognize the significant advantages of the arch-type press and it thus is far more likely that the arch-type cutting press was used.

Figure 4. Cutting presses from Diderot (left) and Thompson (right.)



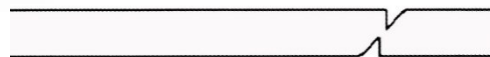
The mechanical requirements of punching a flat metal disc out of strip, along with the image from Thompson and tool marks seen on coins struck on miscut planchets, allow us to be quite certain of the overall design of the punch-and-die set used to cut planchets.

The presence of fairly deep and angled cutter marks on both sides of coins struck from miscut planchets shows that both the punch and die had sharpened edges.



Figure 5. Connecticut copper on miscut planchet. Cutter marks on both sides are typical, including on later Federal coinage, showing that a sharpened punch was typical for the period - see following discussion. Image courtesy of Roger Siboni.

Figure 6. Diagram of cutter marks, courtesy Roger Siboni.<sup>12</sup>



<sup>12</sup> Siboni, Howes, and Ish, pg. 94.

Measurements and diagrams by James Spilman, Roger Siboni<sup>13</sup>, and others have shown that the cutter marks on one side of the coin have a smaller radius than the other side, proving that the punch drove the strip into the lower cutting die, cutting and shearing the planchet, and finally pushing it through the die into a collection box or basket below the press.

Based on a study of cutter marks on Connecticut coppers and Fugio cents with cutter marks, James Spilman created an accurate diagram of a punch and cutting die in *CNL* 63, showing a punch slightly relieved (hollowed) to produce a cutting edge on the inside of the punch.

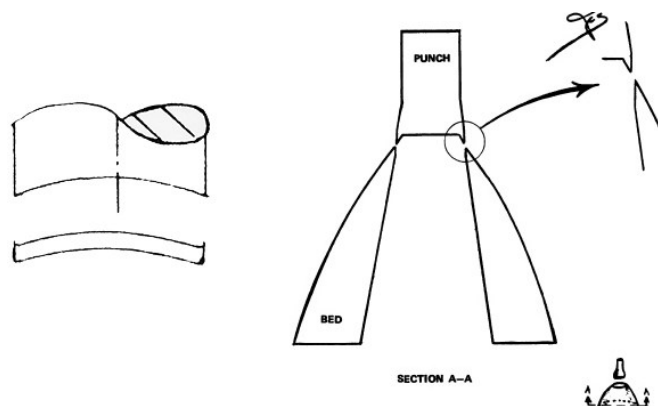


Figure 7. Curved punch and resulting cupped planchet from Cooper, left, and Spilman's punch and die set *CNL* 63, pg. 790, right.

Spilman's diagram is remarkably similar to that shown by Denis Cooper in *The Art and Craft of Coinmaking*, although Cooper has the sharpened inner edge of the punch created by lathe-cutting a slight semi-circle in the punch face as opposed to Spilman suggesting a flat-machined relief with beveled edges.<sup>14,15</sup>

Either way, as the punch is driven into the strip, the metal will bow up into the hollow of the punch producing a slightly "cupped" (i.e., curved) planchet as shown in the diagram. A cupped planchet will create a slight central strike weakness on either the obverse or reverse, depending upon which die the concave side of the planchet is facing. Die wear, cracks, sinking, and simply weak striking make it impossible to determine just how much the cupping contributed to weakness.



It should also be noted that no matter how sharp the cutting edges, the copper will work-harden during the punching and the planchet will have a sheared (fractured) area in the center of the edge. Additionally, the cutting edges will push up metal creating "burrs" on both sides, which are occasionally seen struck into the surface of the coin at the periphery.

Figure 8. New Jersey copper with cutter mark and struck edge burrs at left, courtesy Roger Siboni.

After punching, the planchets needed to be deburred and cleaned of any manufacturing oils or grease, which would cause the planchet to stick to the dies. The best description of this operation is

<sup>13</sup> Roger Siboni, personal communication.

<sup>14</sup> Denis Cooper, *The Art and Craft of Coinmaking*, pg. 100.

<sup>15</sup> James Spilman, "An Overview of Early American Coinage Technology," *The Colonial Newsletter*, No. 63, p. 790.

found in Machin Jr's recollection in which he states that the planchets were tumbled in a cylinder (probably a barrel) overnight with sand, sawdust, and water. He goes on to note that after the tumbling the edges were quite smooth.<sup>16</sup>

It is not known what other pre-federal mints used to clean and deburr planchets, however, Jarvis' account book shows that on Sept. 1, 1788 James Dixson was paid for "making a machine for cleaning coppers" so it seems likely that other pre-federal mints used similar tumbling machines.

It is likewise not known if the planchets were annealed after cutting or if the strip was annealed just prior to cutting. Either process is possible as simply cutting blanks would not harden the copper enough to require annealing. The federal mint did anneal planchets, but they were upsetting the planchets to provide better metal flow at the periphery and that would have hardened the periphery enough to require annealing for the best flow.

### **Die Preparation**

The proper forging of a "die body" was no simple task. Dies had to withstand repeated heavy impact and enormous pressure. Creating a forging to withstand these forces required a great deal of practical experience. Not only were there none of the "ready-to-use" steel products so common today, there were also no technical texts on the processes or methods - the scientific principles had not even been discovered. The only way to produce a die body was to hand-forge it from raw steel bars and using methods that had been learned by experience.

While forging steel is nothing more than heating the steel to "red hot" and hammering it into shape, it does require a good deal of experience. The forging had to be done rapidly as red-hot steel will decarburize (lose carbon) in open air, resulting in a softer steel that wears quickly. The forger also needed to be careful not to leave any seams as these would cause cracking during hardening or in use.

The types and quality of steel available at this time were also problematic. The most common steel was "blister steel" made by the cementation process: refined "bar iron" was packed in charcoal, sealed in an air tight box, and heated to a red heat in a furnace for several days, followed by slow cooling.<sup>17</sup> The carbon slowly diffused into the iron creating steel. The reactions caused by this process resulted in a bar with a blistered surface, hence the name. The resulting steel bar was not homogenous; it varied in carbon composition and structure throughout the bar and often there were areas of unconverted iron. Additionally, the iron from which it was made often contained defects such as slag inclusions and air pockets.

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<sup>16</sup> Howes, Rosen, Trudgen, 61.

<sup>17</sup> K. C. Barraclough, "*Steel before Bessemer: I Blister Steel: the birth of an industry*," pp. 48 – 52, and "*The Development of the Early Steel Making Processes*," pp. 16 – 25 and pg.79. The cementation process was the first process that could convert large batches of iron (hundreds of pounds to tons) into steel. It was developed sometime prior to 1574 when it was described by Lazarus Ercker in his "*Treatise on Ores and Assaying*." Prior to that, steel was made in very small batches by a number of means.



Figure 9. Blister steel bar, left, and forging blister steel, right.

The other two types of steel available at this time, “natural” and English Cast steel, had their own attendant problems and it is very unlikely that either were used. Natural steel varied greatly in carbon content so some bars would harden well, while others would remain quite soft. The Federal mint tried one small batch in 1800 and never purchased it again. Any reasonably experienced blacksmith would have been aware of the problems, making it highly unlikely that it would have been used for die bodies. English Cast steel was the best steel of its time - when properly forged. However, it was expensive, one-and-a-half to two times the cost of blister steel, and when not properly forged, resulted in dies that wore out quickly or sank in use.<sup>18</sup> It is thus very unlikely that the smiths supplying the pre-federal mints used this type of steel.

Despite the problems, blister steel had been successfully used for coining dies in Europe for well over 200 years with the quality of the British and French coinage of the 1700s to 1800s attesting to the fact that it was adequate to the task when properly forged. To use this steel, experienced blacksmiths had developed the rather laborious practice of cutting small pieces of blister steel from the bar, inspecting them for any inclusions or unconverted iron, and then forge-welding the acceptable pieces into a die body.<sup>19</sup>

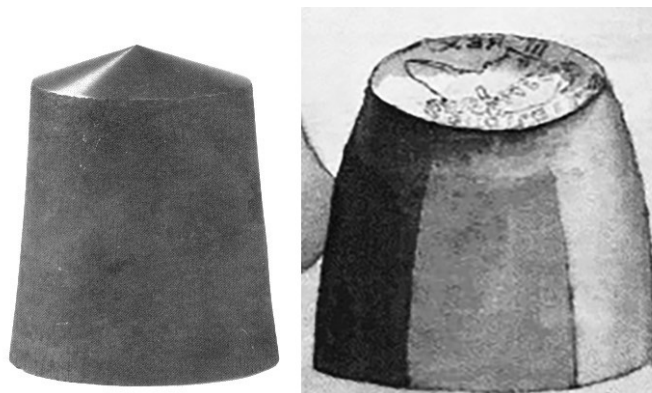


Figure 10. Forged die body, left, die from Thompson, right.

While period dies in American, British, and French museums show it was typical to forge a roughly cylindrical die body, other shapes were used. One such shape is the octagonal die shown in Thompson (see Figure 9). Period dies in British and French museums likewise show this shape as do

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<sup>18</sup> Cooper, pg. 160.

<sup>19</sup> Cooper, pg. 79.



the 1803 U.S. ten dollar and 1805 half dollar obverse dies in the American Numismatic Society Museum. Since there is no way of knowing which shape the pre-federal die makers used and different mints may have used different shapes, cylindrical dies will be used to illustrate the die-making processes.

It should be noted that Jarvis' account book show that his company purchased forged die bodies from Caleb Ford, a local blacksmith.<sup>20</sup> Given the experience required to properly forge steel and the expense of hiring a blacksmith when one was not needed full-time, it is most likely that all of the pre-federal mints purchased forged die bodies (and other necessary tooling) from local blacksmiths.<sup>21</sup>

Once the die body was forged, it was then softened (annealed) by heating it to a cherry red color and allowing it to cool slowly. While the die bodies were typically packed in charcoal and then sealed in a copper annealing box to prevent serious oxidation, some scaling was inevitable so the body was cleaned by brushing with a wire brush or swishing in dilute acid. Any stubborn bit could be cleared with a bit of fine emery cloth.

The shape of the die face depended upon the intended use. If the body was to be hand-engraved as a coining die, the face was turned to a very slight convexity as this shape helped set the finished die's "basin".<sup>22</sup> Die bodies for hubbing were turned to a shallow cone to aid in metal flow.

For hand-cut dies, the engraver would first polish the die face to remove any machining lines and then coat the face with a fine layer of "transfer" wax. A graphite or charcoal pencil drawing of the central device was laid face-down and lightly rubbed with a smooth burnishing tool to transfer the design to the wax. The design was then carefully traced with a graver. Using various gravers, gouges, scribes, and punches the engraver then cut and punched the major designs into the die. This was no small task. Not only did the engraver have to accurately judge the depth of the cutting, he also had to cut the design mirror-imaged compared to the finished coin.

Hand punching or cutting of the letters, numerals, dentils, and other fine details completed the design.<sup>23, 24</sup> The die was then lapped (polished) with a fine polishing compound to remove the extraneous metal pushed up by the engraving and punching, and then basined and hardened as described below.

Figure 11. Hand engraving a die. Photo courtesy Ron Landis.

Master punches or "hubs" were engraved in relief as seen on a finished coin while master dies were engraved incuse just as with a working (coining) die. Some engravers preferred



<sup>20</sup> Clark and McDowell, pg. 4551.

<sup>21</sup> The federal mint paid Adam Eckfeldt \$500.00 per year as the "Die Forger and Turner." He was paid extra for blacksmith work other than forging dies, bringing his earnings to nearly \$650.00 per year. This would have been a huge and unnecessary expense for a pre-federal mint.

<sup>22</sup> The die face has a very slight convexity to help with metal flow and ensure the coin does not stick to the die as it could if the face was flat.

<sup>23</sup> Impressions from the obverse and reverse Fugio master hubs show that Buell included the dentils in the master. This will be discussed below.

<sup>24</sup> Features that are incuse on a coin are easier to punch or cut into the hub and would have been entered in that manner.

to start the process by engraving a master die while others preferred to cut a master hub in relief.<sup>25</sup> The choice was up to the engraver as both methods worked equally well. Pre-federal master hubs and master dies typically only contained the central device and occasionally the dentils as U.S. die-sinkers lacked the technique to hub full dies.

Abel Buell did try to make a nearly complete obverse and reverse hubs for the Connecticut coppers. However, the process did not work well, with James Spilman noting:<sup>26</sup>

*We have stated that in his 1786 Mailed Bust Left family of coinage Abel Buell produced coinage dies from complex hubs. Identical obverse dies and identical reverse dies! Well, almost identical - but not quite. His process was not perfect by any means, but it was good enough to confuse numismatists for almost 200 years.*

*The lack of perfection during the hubbing process caused Buell to resort to hand finishing on individual dies. Some obverses were satisfactory as sunk and were used without additional handwork, but most required enhancement of detail in the centermost area. All reverse dies received some degree of handwork. This hand- work resulted in discernible differences between otherwise almost identical dies...*

The federal mint tried several times to hub full half cent and large cent reverses, but these attempts likewise ended in failure as the dies required hand engraving to strengthen parts of the design which did not properly impress, just as Buell experienced. U.S. die-sinkers would finally learn the secret of hubbing full dies when Franklin Peale returned from his visit to the European mints in 1834 - 1836.<sup>27</sup>

Once the engraving was complete, the hub or die had to then be hardened and tempered. Hardening was accomplished by placing the hub or die in an iron box packed with charcoal to prevent oxidation and heating to a cherry red. The hub or die was then removed with tongs, rapped sharply to shake loose the charcoal, and rapidly cooled by plunging it into a vat of water or placing it under a jet of water. Heating the steel to a cherry red caused the individual iron and carbon atoms in the steel to rearrange themselves and the rapid cooling “froze” the atoms in steel in that arrangement.

The rearrangement of the atoms resulted in the steel becoming very hard, but unfortunately also too brittle for use, and the hub or die had to be tempered by heating it to a deep yellow or blue color and allowing it to cool normally. The tempering caused some of the steel to shift to a different arrangement of atoms, thereby reducing the brittleness but still retaining much of the hardness.

If the engraver started by engraving a master die, it was used to raise a number of working hubs then used to sink the working dies, along with a couple spare hubs that could be used to sink additional master dies if the original cracked in use or wore out. If the engraver started with a master hub, it was

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<sup>25</sup> Records from the federal mint show that engraver Robert Scot preferred to start by engraving a master die while the appearance of several hubs made by Jean-Pierre Droz strongly suggest he started with a master hub.

<sup>26</sup> James Spilman, “An Overview of Early American Coinage Technology,” *The Colonial Newsletter*, No. 65, pg. 816 and “Abel Buell, Our American Genius”, *The Colonial Newsletter*, No. 39, pp. 427 – 428.

<sup>27</sup> Regional Archives at Philadelphia, Record Group 104, Entry 23, Peale Correspondence, “Report by Franklin Peale of his visit to Europe in the mint service”, pp. 170 and 209. This report is also available on the Newman Numismatic Portal at <https://nnp.wustl.edu/library/book/517549>. The “secret” to hubbing full dies was to use a lathe to turn-off the peripheral disturbed metal pushed up and out by hubbing. This extraneous metal unfortunately created a very effective mechanical dam that prevented further hubbing - see Cooper, pg. 163.

typically used to sink multiple master dies which were then used to raise the working hubs and likewise used to sink working dies. Again, this was protection against the master cracking in use.

The 1786 Mailed Bust Left Connecticut coppers and Fugio cents strongly support the contention that Buell started with a master die. The lettering and dentils in the nearly complete hub he used to sink the 1786 MBL Connecticut dies and the dentils, rays, and most sundial features seen on the American Congress obverse hub trial would have been far easier to cut and punch incuse in a master die than hand cut in relief in a master hub. Further study is needed to determine which hub-and-die replication process were used at the other pre-federal mints.

Regardless of whether the process started with a master hub or master die, the rest of the processes were fundamentally the same. The master hub or die would be placed in the in the upper die holder of a large screw press opposite a die body that had been prepared as described above. Contrary to the conventional description that has the hub or die being impressed by several hard blows of the press, the hub or die was actually slowly pressed into the steel blank - the press essentially being used like a huge vice. The number of impressions required to sink a die or raise a hub depended on the size and the amount of detail. Small hubs or dies with just a simple portrait usually required only one or two, while larger, more complex hubs or dies might need three or more impressions to fully impart the design.

The hub or die was then annealed, cleaned, and then lapped (polished) to remove any extraneous metal pushed up by the impressing. The engraver would also touch up any part of the design that had not been fully impressed. The hub or die was then hardened and tempered as previously described.

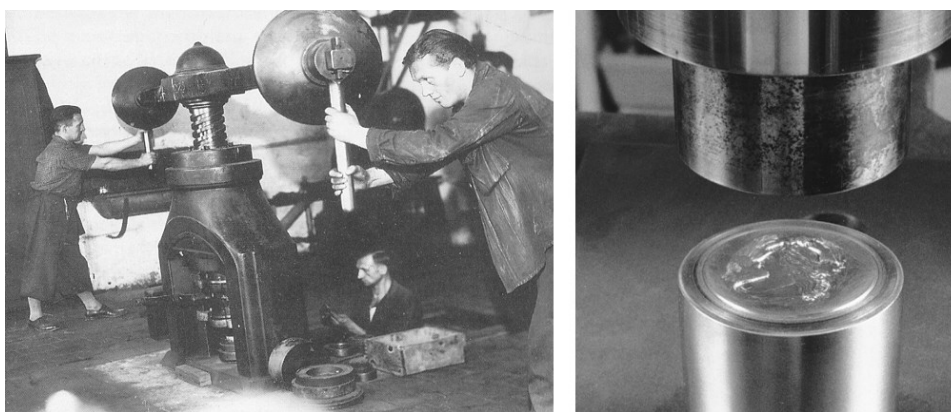


Figure 12. Hubbing with a screw press (courtesy of Denis Cooper) and hubbed die (courtesy of Ron Landis)

After the impression, the working die still typically only contained the central device and, occasionally, the dentils. All of the peripheral lettering, numerals, etc. had to be hand engraved or punched in each die (the exception, of course, being the 1786 MBL Connecticut). And, tall, thin lines did not hub well, so those often had to be hand added or strengthened.

Once all of the elements were punched or engraved into the die, the die was hardened and tempered as previously described. Dies were then typically “basined” (lapped) to a very slight convexity.<sup>28</sup> This slightly curved surface ensured that when the planchet was struck, metal would be

<sup>28</sup> U.S. Mint records show the radius of curvature was very slight, 11 to 30 inches depending on design, so a die would appear to be absolutely flat to the naked eye.

forced into the central design and then flow out to the periphery, producing a better strike. If the die face were flat or concave, there could be insufficient metal flow to fill the central image. The slightly convex shape also helped prevent the planchet from sticking to the die.

Hardening was the "moment of truth". Plunging a red-hot die into cold water placed a lot of stress on the hub or die and quite often they would crack through or shatter while others cracked immediately upon use. Some of this is certainly attributable to poor die steel, but the fact that dies cracked or sank so heavily during striking shows that the main problem was poor forging techniques leaving subsurface seams, slag inclusions, and voids.

The problem of hubs and dies cracking at the early federal mint was so acute that they adopted the process of spraying the face with cold water rather than plunging the entire piece into water and swishing about. The spray process was far less stressful and allowed relatively significant defects to make it through the process. The hub or die would, of course, fail relatively quickly, but at least they got some use out of it.<sup>29</sup> Again, it is unknown if any of the pre-federal mints employed this solution.

Owing to the lack of detailed records, we can only calculate some very rough die life estimates for the pre-federal mints. Using the mintages estimates and the number of known obverses and reverses, the Massachusetts cent dies have an estimated life of 13,000 to 15,000 strikes per die. The estimate for the Fugio cents is 16,000 to 21,000 and that for the New Jersey coppers is about 36,000 for the obverses and 43,000 for reverses.<sup>30</sup>

While the depth, shape, placement, and volume of the devices would certainly affect die life since they are effectively hollows and notches cut into the die face thus creating "stress risers," the forgoing die life estimates show that the main issue was the skill of the forger. The Massachusetts and Fugio figures are comparable to the 23,000 strikes per die for cents at the federal mint in its first full year of operation in 1794, when Henry Voigt, who was not a master smith, was doing the forging. The estimate for the New Jersey coppers is essentially the same as the 40,000 strikes per die for large cents at federal mint from 1795, when master smith Adam Eckfeldt took over forging, and through 1799, the last year in which blister steel was used for dies.

One of the more interesting points of pre-federal die-sinking is James Spilman's proposal that, on the Fugio cents, Abel Buell used a dentil "pipe-die" punch to impress all the dentils at once.<sup>31</sup> Spilman based his proposal on the American Congress hub trial, but never described what he thought he saw in the dentil pattern that brought him to that conclusion. Nonetheless, his dentil "pipe-die" has become widely accepted in the collecting community.

There are two major problems with this proposal. First, the American Congress hub trial clearly shows a repeating pattern of four to eight dentils, thus casting serious doubt on this "pipe-die."<sup>32</sup> And, while few Fugio dies show enough dentils to see a pattern, there are sufficient dentils on obverse 11 and reverse X and those dies have a repeating pattern of three to four dentils. That both a design proposal die

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<sup>29</sup> William Kneass, *Journal of the Franklin Institute*, vol. 1, no. 2, Feb. 1826, "On Hardening Dies at the First Mint," pp. 97 – 99.

<sup>30</sup> Estimates for the Fugio cents are based on a mintage estimate of 400,000. The 16,000 figure includes the Club and Scalloped Rays pieces thought to have been struck at a later time while the higher figure excludes them. It is also important to note that the figures are *averages*. Thus, one die might only last a hundred strikes or so, while another might last 50,000 or more. This die life variation is clearly illustrated by obverses that were paired with several reverses or vice versa.

<sup>31</sup> Spilman, CNL 65, pg. 818.

<sup>32</sup> The pattern could be a single eight dentil punch or repetitive use of a four-dentil punch, probably the latter given the pattern seen on "regular issue" Fugio cents such as obverse 11 and reverse X.



(the American Congress) and “regular issue” dies both show repeating dentil patterns directly contradicts Spilman’s proposal.

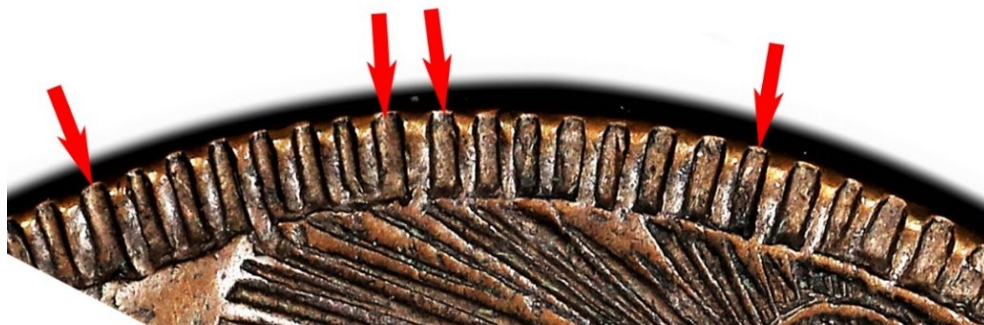


Figure 13. Section of American Congress obverse hub trial showing repeating dentil pattern.  
Photo courtesy of PCGS CoinFacts.

Furthermore, making and using a “pipe-die” in 1787 would have been pretty much a mechanical nightmare. Even if we assume that a relatively talented blacksmith could make a reasonably concentric pipe (probably by turning and then boring-out a forged bar), the main problem is that it will not stay that way during hardening.

As previously noted, steel hardens by the iron and carbon atoms shifting around when heated to cherry red and plunging the steel into cold water freezes the atoms in that arrangement. Both the shift in the atoms and the stresses induced by plunging the red-hot metal into cold water will distort the die, changing the dimensions and shape. While this effect is relatively small in a solid die body, the same would not be true of a thin pipe only about the thickness of the dentils.

Many readers have likely seen a few episodes of The History Channel program *Forged In Fire* in which a contestant’s red-hot blade forging twists into a wavy mess when plunged into cold oil to harden it.<sup>33</sup> And, that’s using today’s homogenous, fine grain steel. This issue would have been many times worse using inconsistent blister steel. It would be a minor miracle if a blister steel pipe-die survived hardening. Most likely, it would turn out to be a warped, wavy oval which probably had split.

Finally, even if we assume a reasonably round and concentric “pipe-die” with fairly parallel faces could be successfully made and hardened, Buell could not simply rest the punch on the die and hand-hammer it to impress the dentils. Doing so would cause the punch to rock and jump. Buell would need to use a screw press to impress the dentils and that creates the problem of properly aligning the punch to the die.

In sum, neither the challenges of making and using a ring punch in 1787 nor the dentil pattern seen on Fugio dies support the proposal of a “pipe-die,” while the eight-dentil pattern found on the American Congress piece does strongly support the contention that Buell used a multi-dentil gang-punch just as he had on the Connecticut coppers.<sup>34</sup>

<sup>33</sup> Oil is often used today as it places less stress on the steel.

<sup>34</sup> James Spilman, “*Abel Buell – Our American Genius, Part II*,” The Colonial Newsletter, Number 39, pg. 429. Spilman proposed a 15 dentil gang-punch for CT Reverse L. However, that coin was struck using a very heavily eroded die, strongly suggesting the “pattern” was due to die damage. Coins using reverse L on the Heritage archives do not show dentils even remotely similar to that shown by Spilman, thus supporting the contention that the die was damaged. The present author has found patterns from four to eight dentils on a number of CT, NJ, and Fugio dies showing the use of dentil gang punches was a standard practice.

As a final word, be aware that determining the exact dentil pattern is problematic and pretty much an educated guess. Impressing a die with a punch will transfer the design to the die, but it will not be a perfect reproduction of the punch. Metal flow during punching, how hard the punch was hammered, how even the blow, how tilted the punch was during each impression, and if the punch “jumped” or rocked during the blow will affect the appearance of the dentils in the die. For the same reasons, the hub will not be a perfect reproduction of the die and a hub trial will not be a perfect reproduction of the hub.

Additionally, dentil gang-punches were often engraved with one end dentil slightly smaller than the others. The small dentil was used for positioning and spacing, being placed in the last of the previously punched dentils. This can create an extra wide dentil or, if the die sinker forgot to place it in the previously punched dentil, it can create a smaller, thinner dentil.

Given all of the possible sources of variation, it is actually quite surprising we can come to a decent guess as to the design of the punch. And, discerning the pattern from a struck coin is even more difficult since a coin is at least four generations removed from the punch (punch, master die, working hub, working die, coin). The same is true of all of the other features on a coin. In fact, it is somewhat amazing that we can reach a reasonable conclusion as to what hubs and dies looked like by studying coins struck nearly 250 years ago.

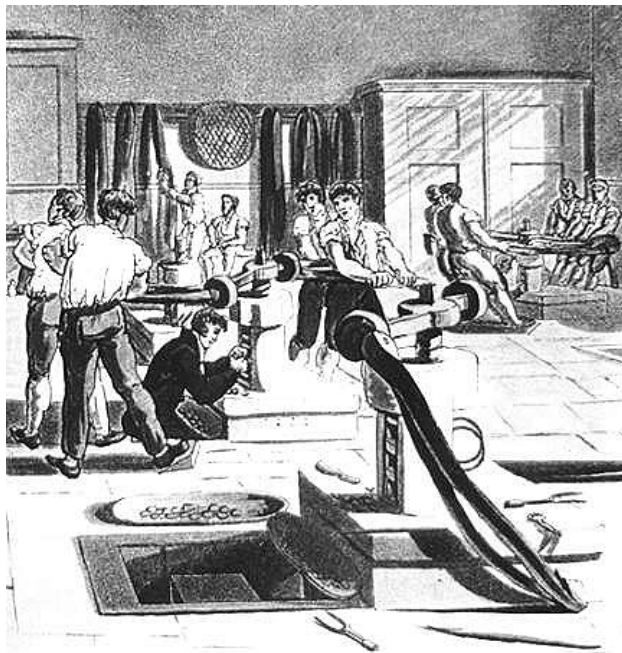
### **The Presses and Striking**

Despite the fact that Machin Jr.’s is likely recounting a story his father told him, the description of the press is quite accurate as shown by later descriptions of the screw presses at the federal mint, Franklin Peale’s description of the screw presses at the Paris mint, the wood-cut image from Rudolf Ackemann’s *Microcosm of London*, and various 19<sup>th</sup> century screw presses in European museums.

All of these describe or show the iron fly-arm being about ten feet long with heavy end-weights and which was fixed to the top of a fast, square-threaded screw passing through a cast iron or bronze frame and operated by men pulling on ropes or heavy leather thongs attached to the end of the fly-arm.

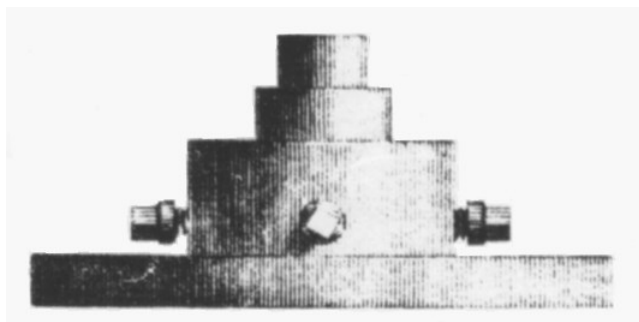
Many numismatic texts use the rather crude and out-of-scale drawing from Samuel Thompson’s 1783 “An Essay on Coining” or the drawing of the early 18<sup>th</sup> century screw press shown in Diderot. A more accurate view of late 18<sup>th</sup> century presses is found in the aforementioned “*Microcosm of London*”.

As this illustration shows, screw presses of this era were rather stout, compact devices of about waist height. The illustration is also particularly interesting as it shows the coiner sitting in a pit just as Machin, Jr. described.



Dies were mounted in the press using “die cups.” As the name implies these were cup-shaped fixtures with screws passing through the side to fix the dies in place. One die cup was bolted to the press bed and the other was bolted to a torque-eliminator attached to the end of the screw (which prevented the upper die from rotating along with the screw). If the upper die and cup had been bolted directly to the screw, it would have been rotating fairly rapidly when it contacted the planchet, obviously resulting in smearing during the strike.

Figure 14. Die cup and die.



Two types of torque-eliminators were common at this time, one being simply a block of iron or steel held against the underside of the screw with springs or a counter-weight and the other being a multi-part, collar-like device affixed to the screw which allowed the screw to rotate freely while holding the cup and die stationary. It is not known which type was used in pre-federal mints.

One interesting point is the number of men required to operate the presses. Machin Jr. says five men were used, one feeding planchets and ejecting struck coin with two men on each side of the fly-arm, pulling on ropes to open and close the press. However, Jarvis' previously cited account book shows only three men operating that press.<sup>35</sup> Perhaps Machin's Mills used more men on the fly-arm to make the work easier on each, but a more likely scenario is that Machin Jr.'s tale is simply a bit misstated.

On page 165 of *The Mint*, Sir James Craig notes that the large presses in the Tower mint were operated by a crew of seven, three of whom rested while the other four worked the press. It thus seems likely that the Machin's presses were operated in a similar manner with two men working the arm and two “resting” (probably assisting with bringing planchets to and hauling struck coins away from the press).

Machin Jr.'s account of the end-weights being 500 lbs. each is also likely a misstatement as the historical record shows the weights were generally 100 to 150 lbs. each. Period presses in European museums and drawings of presses show the iron swing arm was about four inches square and, as Machin Jr. recounts, about ten feet long. That makes the arm alone about three-quarters of a ton. It is hard to imagine that the small counterfeit halfpence struck at Machin's would really require an additional half ton to bring up the strike.

A key point that has generated much discussion over the years is the supposed striking rates achieved at these pre-federal mints. Machin Jr. said the rate was 60 per minute and James Spilman related a second-hand tale about Abel Buell which stated that, “*Upon the conclusion of the Revolutionary War, Mr. Buell and some others were employed by the state in coining coppers. Mr. Buell constructed all the apparatus for this purpose, and to such perfection did he bring it, that he was able to coin 120 coins in a minute.*”<sup>36</sup>

<sup>35</sup> Clark and McDowell, pg. 4543.

<sup>36</sup> James Spilman, “Abel Buell – Our American Genius, Part I,” *The Colonial Newsletter*, Number 34, pg. 354.

In subsequent discussion, Spilman did note that manual screw presses were simply not capable of such a rate, speculating that they might achieve 45 per minute, at best (the actual rate was 30 to 40).<sup>37, 38, 39</sup> He further noted that Matthew Boulton's screw press which was driven by a steam engine was only capable of 60 per minute and that striking rates of 100 or more were only achieved with the further development of Ulhorn-type presses in the later 1830's.

Spilman then went on to speculate that Buell had developed some sort of high-speed drop press based on Charles Bushnell's statement that Buell had used such a press for the Fugio coinage.<sup>40</sup> As with the other statements, Bushnell's claim is, at best, second-hand and may well be nothing more than something he heard or thought.

The problem with all of these stories is they are second-hand. They are not documentation from or statements by anyone directly involved with either the Machin's Mills or Connecticut/Fugio mints. However, direct documentation does exist in the form of the previously noted Jarvis account book and that account book directly contradicts these second-hand tales.<sup>41</sup>

First, the account book shows the purchase of two "stamping presses" from Peter Curtenius on Feb. 6, 1788. Additionally, Daniel Talmadge was paid on May 3, 1788 for blacksmith work and Caleb Ford was paid twice, on April 12 and Sept. 1, 1788, for forging die bodies. This clearly refutes the claim that Buell made all of the equipment. And, the purchase of two additional presses casts serious doubt on the supposed striking rate of 120 coins per minute from a single press as the Jarvis mint obviously had multiple presses.

Entries in this account book showing the number of striking days and deliveries of coins further refute the supposed striking rate. From March 1 to April 26, 1788 a single three-man press was in use for a total of 40 days and from March 8 through May 1, 1788, the mint delivered a total of 6890 lbs. (approximately 306,222 coins) of Fugio coppers.

The historical record shows the typical working day at this time was 10 to 11 hours long with records from the federal mint showing an 11-hour workday (with an hour each off for lunch and dinner for a total of 13 hours at the mint).<sup>42</sup> Using the 11-hour workday and taking off an hour per day for set-up, clean-up after striking, and any press jams or other problems leaves an approximate 10 hours per striking day or a total of 24,000 minutes over the 40 striking days recorded in the account book, yielding a striking rate of just 13 per minute!

The account book does show the delivery of 2383 lbs. of Connecticut coppers just a few days later on May 21<sup>st</sup>, 1788. Adding those in at an estimated 140 grains each yields an additional 119,150 coins, but still only brings the estimated striking rate to 17 per minute.

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<sup>37</sup> James Craig, *The Mint*, pp. 164 - 165. Craig notes that in 1676 the coining rate for guineas at the British Tower Mint was 26 per minute for a hand-fed press. He goes on to state that a sustained rate of 30 shillings a minute for the full day in 1696 to 1698, but then notes that the work was so arduous the pressmen only worked the press for five hours of the full ten-hour day, thus implying that at least two presses were necessary for that rate.

<sup>38</sup> In *The Granite Monthly* of Nov. 1881, George Stark recounted the tale of a relative visiting the U.S. Mint with the workers stating they could strike 43 half dollars per minute on a screw press with an auto-feed.

<sup>39</sup> In his report on the European mints, Franklin Peale noted the French were striking 35 five-franc pieces per minute with a five-man screw press with an auto-feed.

<sup>40</sup> Crosby, pg. 302.

<sup>41</sup> Clark and McDowell, pp. 4541 - 4569.

<sup>42</sup> Regional Archives at Philadelphia, Record Group 104, Entry 3, "*Rules and Regulations of the Mint*," 1795 letter from Elias Boudinot.



No matter how these numbers are “massaged,” there’s clearly no way to get the striking rate for a single press up to the supposed 120 per minute. And, the same argument holds for the claimed striking rate of 60 per minute for a single press at Machin’s Mills.

This does not mean that the stories of these mints were mistaken or exaggerated. A careful reading of these stories shows that neither states the striking rate was for a single press. In fact, there is no mention of how many presses were used. Furthermore, neither story says this was a *sustained rate*. In the end, the stories are relating a *maximum striking rate for multiple presses*. The inference that they were a sustained rate for a single press is simply an interpretation of later numismatists.

With the British Tower Mint achieving a maximum striking rate of 26 to 30 coins a minute in the late 1600’s, it seems quite likely that American minters could do the same some 90 years later.<sup>43</sup> Using that rate, Machin’s Mills would then have had two presses in operation and the Jarvis/Connecticut mint about four.<sup>44</sup> Concluding these mints had multiple presses dispels the notion of unrealistically high-speed presses that no one else had *and* which mysteriously disappeared once these mints closed.

On the other end of the spectrum, we have the strangely low striking rates from Samuel Thompson’s “*An Essay on Coining*.” Thompson states that striking two thousand Guineas would take a day-and-a-half.<sup>45</sup> Again assuming a 10-hour workday, that calculates to just over **two coins per minute**! Clearly a rate of just two coins per minute in 1783 is very odd given the Tower Mint striking 26 to 30 a minute in the late 1600’s.

The answer is Thompson’s proposal of just **two workmen** and a porter for all operations from rolling to cutting and striking.<sup>46</sup> With just two workers and a porter to aide in moving material, the workmen would have had to roll the metal, cut planchets, and then strike, count, and pack coins, repeating those steps over again as necessary. The low rates are thus no surprise that all.<sup>47</sup>

Last, the issue of overstriking needs to be addressed. Some numismatists believe that host coins had to be annealed prior to overstriking and that coins with strong undertype were not annealed as well than those showing little undertype. This contention is directly contradicted by accidentally double-struck coins.

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<sup>43</sup> Craig, pp. 164 - 165.

<sup>44</sup> The low striking rate of 13 to 17 per minute calculated from the Jarvis account book was likely due to the mint being in the process of shutting down. Jarvis ceased all coining in Sept. 1788 and sold the minting equipment to Machin.

<sup>45</sup> Randy Clark, “Transcription of Samuel Thompson’s Essay on Coining (1783),” *The Colonial Newsletter*, No. 148, pg. 3850.

<sup>46</sup> Clark, pg. 3853.

<sup>47</sup> The same applies to the low striking rates noted for convicted British counterfeiters in Siboni, Buell, and Ish (pg.47). As with Thompson, these were small operations that were not striking continuously.



Figure 15. Impressive double struck Connecticut copper. Courtesy StacksBowers.

Striking does not cause copper (or any coining metal) to become rock-hard. Coining is actually a fairly light embossing operation that moves a relatively small amount of metal. It is the volume of metal moved and the amount of that movement which determines just how “work-hardened” metal becomes. If there is enough metal movement, then the metal will become so work-hardened that it must be annealed prior to additional working; any attempt to continue working the metal will cause it to fracture.

Most are certainly familiar with this principal (even though they may not realize it), having bent a paperclip back-and-forth until it breaks. The same principle applies to coins. If a single strike really caused the copper to become that hard, or nearly so, then a second strike would barely leave an impression and, if struck hard enough, the coin would crack.

Since accidental “overstrikes” obviously were not annealed prior to the second strike and many have very strong second impressions with no cracking, then the first strike clearly did not make the copper all that hard and there is another answer for the variation in undertype on deliberately overstruck coins. That answer is the inherent variability of a screw press. When the pressmen are fresh and “in-sync,” a screw press can produce very strong strikes, but when the men grow tired or get out of sync, the strike can be very weak.

That strike variation applies to **both** the host coin and the overstrike. Thus, there can be a weak overstrike on a strongly struck host coin, a strong overstrike on a weakly struck host coin, an average strike over an average strike, or any combination thereof. Add in the variability of in hardness of the host coins due to both the strike, and perhaps impurities in the copper, and there is more than enough variation in the process to explain the differences seen in undertype without proposing a variation in annealing.

While it is possible to non-destructively test the hardness of overstruck coins, that would prove nothing. Even if coins with strong undertype were found to have a **statistically significant** higher hardness than those with weak undertype, it would not prove variation in annealing since strike variation is also a possible cause. If little difference in hardness was found, that would certainly suggest that either the coins were not annealed or if they were, there was no appreciable difference in the annealing. Even if there was an eyewitness account of the host coins being annealed, that would still not prove the proposition of annealing variation as the cause of variation in undertype.

In the end, the only solid evidence either way is that found on accidentally double struck coins. Since, as previously noted, those coins were obviously not annealed prior to the overstrike and they show the same variation in undertype, there is no reason to propose any other causation.

### **Running a Mint - How Many Men?**

Past researchers have produced various “guesstimates” on how many men it took to run a mint. However, there is no need to guess, we can use Jarvis’ account book and the account books from the early federal mint to gain a fairly accurate view. Jarvis was in the process of shutting down and the earliest federal account book shows a start-up operation, thus both of these provide a good idea of the minimum manpower required to run a small operation.

Jarvis’ account book shows both full-time and part-time workers with the average being the equivalent of about eleven full-time workers per day. On most days, one man was employed rolling, one cutting planchets, and three operating the press.<sup>48</sup> The others would have been moving copper from casting to rolling, from rolling to cutting, bringing planchets to the press, removing struck coins, weighing and packing coins, and sundry other work.

Henry Voigt’s account book for the U.S. Mint’s early days of April to September 1793 shows essentially the same with 10 to 12 full-time workers.<sup>49</sup> Unlike the Jarvis operation, the same two to three men who operated the press also rolled copper strip and cut and cleaned planchets. Coining at the federal mint was thus not fairly continuous as at the Jarvis mint. Rather, the men would roll and cut a large batch of copper, strike for a period of days, and then repeat. Some of the workers would have brought planchets to the press and removed struck coins.

There were, of course, additional employees at both the Jarvis and federal mint. At the Jarvis operation, Abel Buell was apparently the die sinker and engraver. Someone, probably one of the partners, would have overseen daily operations, and another, probably Jarvis, kept the books. There certainly would have been a general clerk to take care of materials coming into the mint, oversee packed coins leaving, and take care of general records keeping.

In, 1794, the first full year of operation, there was a full-time melter, an assayer (not needed at the Jarvis mint), an engraver, a treasurer, a clerk, and director. Still the total number of workers was approximately the same as in the waning days of the Jarvis operation - 14 to 16 men. We thus have a reasonable manpower estimate for a minimal coining operation employing just one press.

By 1799, the federal mint’s account books show they were operating two presses at a time, employing 14 workers in addition to an engraver, a die forger/blacksmith, a melter and two helpers, an assayer, a chief coiner, a treasurer, two clerks, and director for a total of 25 employees.

Machin and Jarvis would have required similar staff at peak operations - a melter and two helpers, probably four men rolling, two men cutting planchets, three men bringing planchets to the presses and taking away and packing struck coins, an engraver, a supervisor, at least one general clerk, and the pressmen. For Machin’s Mills, ten pressmen would have been required to operate the two five-

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<sup>48</sup> Clark and McDowell, pp. 4541 – 4569.

<sup>49</sup> Regional Archives at Philadelphia, Entry 196, *Personnel Record*. While listed as a “personnel record,” this is actually one of Henry Voigt’s account books showing both personnel and miscellaneous expenses.

man presses and the Jarvis mint would have required 12 for the four three-man presses, bringing the total number to around 25 for Machin's Mills and about 27 for the Connecticut/Fugio mint.

There may have been two or three additional men, one to take care of general maintenance and repair of equipment and another one or two workers to unload received supplies and load kegs struck coins being shipped, although the porters and clerk may have "doubled-up" on the later tasks and the owners (or others) may have served as mechanics.

Records show that the Massachusetts mint had a single coining press.<sup>50</sup> The number of workers can thus be estimated at 10 to 12 for a minimal minting operation. The same is likely for the two New Jersey mints.

### **Some Final Thoughts**

I did find the similarity between the pre-federal mints and federal mint a bit surprising. It really shouldn't be as the first federal operations come just five years after the collapse of the pre-federal mints and records show that federal mint used essentially the same equipment, required the same amount of labor, experienced the same technical problems, and had the same financial difficulty as the pre-federal mints.

In fact, the federal mint purchased and used one of the coining presses used for the New Jersey coppers from Hannah Ogden in 1794 and its original presses and rollers came from John Harper, who may have provided equipment and perhaps did the die forging for the New Jersey mints (explaining the impressive die life seen for those issues).

For those who wish to gain a better understanding of the metallurgical and mechanical principles behind coining, I strongly recommend the book *Metallurgy for the Non-Metallurgist* by ASM International, \$114 from Amazon. Amazon also has a number of beginner texts on basic metal working techniques.

I also particularly recommend several past issues of The Colonial Newsletter. There's a treasure trove of information on the historical processes in issues 34, 39, 62 through 65, 84 (Jack Chard's article on steel-making is excellent), 121, 125, 148, and 163 through 165. They can be downloaded at <https://nnp.wustl.edu/library/publisherdetail/511327> (the Newman Numismatic Portal.)

Last, I hope you enjoyed reading this article as much as I enjoyed researching it. While I am not new to mechanics or early coinage, I have just begun collecting pre-federal coppers and find these coins – the **first early American coppers** – absolutely fascinating.

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<sup>50</sup> Mike Packard, personal communication, 2021. In an Aug. 11, 2021 email, Mike noted that records show the Massachusetts mint had one "Stamping Press" and one "Cutting Press," costing £50 and £20 respectively.



### Acknowledgements

First, I wish to thank Jim Rosen and Jim Glickman for getting me this involved in pre-federal coppers and for sharing their extensive knowledge. Thanks also to Mike Packard and Roger Siboni for answering my numerous emails and sharing their knowledge. This article would not have been half as good without their comments.

Finally, many thanks to Jim Rosen and Bill Eckberg for proof-reading the article and their numerous cogent comments and suggestions. I especially want to thank Jim Rosen for sharing his expertise on the coins and dutifully reading my numerous revisions (I think this is the tenth). As he responded when I sent him rev 4.0, *"Ok, good I didn't start your 3.5 version yet. I'll wait a day just in case you come out with a 4.5."* I did, and then 5.0 and 5.5. He's a trooper.



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## ANYONE CAN MAKE A MISTAKE

(David D. Gladfelter)

... even, at times, Benjamin Franklin.

Collectors of error currency rarely find them on the master printer of Philadelphia's colonial-era bills of credit. Thus it was a surprise to discover one on the face of this twenty shilling Delaware bill of February 28, 1746. The error appears in the third line of text below the cut of the English arms. The word "Assembly" is misspelled "Assemby". In the lower left corner, the plate letter A appears.



This denomination is illustrated in Eric Newman's treatise *The Early Paper Money of America* (5<sup>th</sup> edition) on page 121, but that illustration shows a bill with plate letter B. It does not have the error. Therefore the misspelling on the A bill is not deliberate, as are some of Franklin's misspellings of the provincial name of Pennsylvania, done in order to prevent alterations. This one is only an honest-to-gosh mistake.

Who can say at this late date whether these erroneously-set letters of type came from Franklin's skilled fingers or those of an apprentice? Why would it matter? As the saying goes, if that was the worst thing that happened to him, Franklin's reputation suffers not.



## FURTHER OBSERVATIONS ON THE CONTINENTAL DOLLAR DEBATE

(Roger S. Siboni and James Rosen)

There has been a vigorous debate over the last few years on the Continental Currency pieces and we have thoroughly enjoyed it. We have also relished the updated research of where, when, and why these pieces were struck. While reading the back-and-forth and having had some experience with these and other related numismatic items, some alternative ideas were discussed at one of our recent coin get-togethers. To that end, we thought a few additional observations about these pieces might further this interesting discussion.

Neither author has ever been comfortable with the idea that the Continental Currency pieces were struck as coins in the colonies nor originally as commercial medals in Europe, though they may have been once sold as such based on a recently discovered contemporary advertisement. Nevertheless, becoming collectors' medals may have been their ultimate fate. It seems to us, along with others, that this emission was more likely one of many entrepreneurial endeavors to win approval for a new United States Federal coinage contract from abroad.

It appears to us that there are simply too many distinct Continental Currency varieties and overall examples in existence to explain them away as being initially struck as medals. As medals, they would no doubt be the most prolific America-related medal struck during a period spanning from 1776 to 1783, the latter being the date of the related FELICITAS BRITANNIA ET AMERICA Treaty of Paris medal.<sup>1</sup> What medal was made for America that comes in eleven distinct varieties? While some medals come in three or four different metal compositions (gold, silver, brass, and pewter), none survive today at well above the thousand level. If one assumes as we do that the Felicitas Britannia medal was struck by the same engraver as the Continental Currency pieces, why only approximately 20 survivors of these but a thousand plus of the related Continental Currency pieces? Our view as to why the Felicitas Britannia medal and the Continental Currency pieces were made by the same engraver and mint is not only based on the nearly identical Newman C reverses, but also on the nearly indistinguishable edge devices appearing on several examples, as seen in Figure 1.

Another point which we think warrants a further look is Sarah Sophia Banks' handwritten note above the flyer in her ledger stating: "never current, struck on *speculation* (author's italics) in Europe for sale in America". The word *speculation* stands out to us and might be more relevant than heretofore discussed. Maybe she was referring to these emissions as being made on speculation for an American coinage by an entrepreneurial mint in Europe. While there is some degree of speculation with respect to making medals, the term *speculation* seems more closely associated with coinage manufacture.

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<sup>1</sup> The only medal-like example we can think of that comes close in terms of numbers surviving are the Rhode Island Ship Tokens where perhaps a few hundred survive as opposed to thousands. In the case of the Rhode Island Ship Tokens, there are 5 varieties in 2 metals and approximately 500 plus survivors. See the *Whitman Encyclopedia of Colonial and Early American Coins*, Q. David Bowers, Whitman Publishing, LLC, 2020, pp. 69-70.





**Figure 1.** Continental Currency piece (C reverse) on the left with its associated edge and the Felicitas Britannia medal and its edge on the right. Notice the various similarities.

The discussion of where these pieces were made has included several places in Europe, with Great Britain and Germany appearing to be the leading candidates.<sup>2</sup> While we certainly take notice that its earliest appearance seems to be in a 1783 German calendar,<sup>3</sup> this is not conclusive of a German manufacture. Julia Casey recently reported in *The E-Sylum*<sup>4</sup> the discovery of a German catalogue from 1785 offering to sell a Continental Currency piece. Additionally, in the same issue of *The E-Sylum*, she also reported the finding in a German publication from 1777 of two illustrations of pieces of Continental Currency notes of February 17, 1776, one being a half dollar and one being a sixth of a dollar, the latter with the word Currency spelled Currenccy.<sup>5</sup> Finally, it has also been demonstrated that a German engraver, Elias Gervais (1721-1791), used the monogram EG or sometimes EGF (FECIT<sup>6</sup>) on his works.<sup>7</sup> It has also been argued that Gervais often used line shading on his engravings, a finding somewhat similar to the land behind the sundial on the Continental Currency pieces.<sup>8</sup> Certainly these findings seem to place Germany squarely in the running as to where these pieces were made.

However, there are also several issues with a German manufacturing origin. Germany's involvement with the American colonies and the young America was scant aside from supplying Hessians to the British army. And while England was replete with rogue coin engravers<sup>9</sup>, Germany had a smaller population of fine-medal craftsman and engravers. In that regard, what we find most

<sup>2</sup> Goldstein, Erik, and David McCarthy, "The Myth of the Continental Dollar," *The Numismatist*, January 2018.

<sup>3</sup> Berger, Daniel, *Historisch-Genealogischer Calendar 1783, from Goldstein, Erik and David McCarthy, "The Myth of the Continental Dollar," The Numismatist*, January 2018.

<sup>4</sup> Casey, Julia, *The E-Sylum*, Vol. 24, No. 12, March 21, 2021.

<sup>5</sup> Ibid.

<sup>6</sup> Thought to mean "he made it". Nomisma.org. See also *The E-Sylum*, July 22, 2020.

<sup>7</sup> *The E-Sylum*, July 22, 2020.

<sup>8</sup> McCarthy, David, Personal communication, 2018.

<sup>9</sup> Consider the widespread proliferation of counterfeit British halfpennies and evasion pieces. See also *Clip a Bright Guinea*, John Marsh, Robert Hale & Co., 1971.

fascinating about these pieces is their rather poor execution compared to that of contemporaneous medals from many of the countries in Europe during this time frame, as the *Libertas Americana* medal and the *Comitia Americana* medals can attest.<sup>10</sup> These Continental Currency pieces were undoubtedly a rather crudely manufactured object for the time period in Europe which speaks against a highly-skilled German mint, Tower Mint, or Birmingham Mint origin. However, the possibility of a private, less-accomplished mint in England is certainly not out of the question, as the dies for these pieces appear to be hand-engraved rather than from punches.

Additionally, many errors are present in these dies, such as the Roman numeral IIX for VIII on the sundial and examples of blundered spellings, suggesting again a less skillful mint produced these. The crude *Felicitas Britannia* medal is a medal that could have certainly emanated from such a mint. And finally, while some of the extant white metal pieces by Gervais do look a bit worn as old white metal often does, we feel the execution is still quite superior to that of the Continental Currency pieces or *Felicitas Britannia* medals. Gervais' punches all appear superior, more refined, and different. As previously stated, Gervais used EG or EGF with stops, but in no instance could we find the use of FECIT<sup>11</sup> on his pieces.

Given the abundance of tin in England, its large number of engravers and mints at all different skill levels, the "*Joyful Britain*" legend and iconography of the London skyline on the *Felicitas Britannia* issue, and the long history of tin *coinage* in England, one cannot help but think that these pieces could certainly be of English origin, and not American. To add more support to the English origin argument, York is spelled on all varieties of these pieces as well as on the *Felicitas Britannia* medals as *Yorke*, an old English spelling of York, whereas in America, York is the correct modern spelling as illustrated in all the New York paper currency issues. Further support for York as an American spelling is the American Congress Fugio copper, Newman 1-CC, undoubtedly an American-made product, which has York spelled as *York* on the reverse ring, as seen in Figure 2. The multiple wrong spellings of Currency on these pieces would also appear to generally suggest a non-American origin as well. On the Feb. 17, 1776 1/6<sup>th</sup> of a Dollar Continental Currency note, *Currency* is misspelled as *Currencey*, which suggests just *copying* the misspelling of the word rather than *checking* on the spelling, thus implying that this paper money issue may have been just the "route model" for the Newman 4-D Continental *Currencey* piece.

As to an American manufacture, it just seems too improbable factually and technically that these pieces were made in the colonies or the young United States. Too many people "in the know", like Paul Revere, Robert Morris, and the coin collector Pierre Eugene du Simitiere, never recorded or wrote of these pieces. Furthermore, the accounts of the Continental Congress reveal no record of any of these pieces, strongly suggesting that they were never authorized by the Continental Congress or the Board of Treasury, authorization being a necessary requirement for coinage. The lack of any reporting of these emissions in any colonial newspapers of the day would be considered highly unusual. Moreover, given the fact that in 1794, our federal mint did not have a press large enough to fully strike silver dollars, it would seem highly unlikely that Philadelphia in 1776 would have had a press large enough to strike these pieces.<sup>12</sup> Additionally, it is doubtful that the colonies in 1776 possessed a casting machine to make edge devices. Likewise, it seems improbable that

<sup>10</sup> Consider the various Hancock products of Birmingham: the Pingo Pitt Medals, the Franco-American Jetons, or the Dutch Welcoming America to Nationhood Medal.

<sup>11</sup> The E-Sylum, Volume 21, Number 29, July 22, 2018, Article 10.

<sup>12</sup> Bowers, Q. David, *Silver Dollars & Trade Dollars of the United States, A Complete Encyclopedia*, Bowers and Merena Galleries, Wolfeboro, NH, 1993, p. 165.



during our movement to independence, that the colonies had the desire, priority, organization, or funds to produce or acquire tin for planchets, to produce dies, to strike coins, and to distribute them. Moreover, in examining over 150 almanacs containing coin charts that were published between 1776 and 1800, not one had this Continental Currency piece listed, which would be essential in determining its exchange rate.<sup>13</sup> And finally, in a recent article in JEAN by Julia Casey, she casts significant doubt about how past numismatic scholars interpreted a 1776 newspaper report of a letter from a British officer of the 64<sup>th</sup> Regiment in New York City. This letter had previously been thought to concern the presence of a mint in Philadelphia striking Continental Currency pieces with an assumption that they circulated in New York City in 1776. Her conclusion was that this letter was not about the 1776 Continental Currency pieces and that the contemporary newspaper reports were instead evidence that Congress contemplated issuing an unrelated fractional copper coinage at that time. This places substantial uncertainty about whether these pieces were ever struck in Philadelphia or seen in New York City in 1776,<sup>14</sup> a hypothesis once reinforced by the misreading of the report of this British letter, which had been erroneously cited in the *American Journal of Numismatics* in 1891.<sup>15</sup> This mistaken conclusion has been used as support for a Philadelphia origin of the Continental Currency pieces with this report being used as proof of circulation in New York City.<sup>16</sup>



**Figure 2.** Continental Currency D reverse (Yorke) on left and Fugio CC reverse (York) on right.

A final consideration for the theory that the Continental Currency pieces were struck as a coinage proposal in Great Britain, Germany, or Continental Europe is that there is significant precedent for such foreign proposals in the colonies and in the newly created United States. As the United States had no specie of their own before nor right after the Revolution, it would not seem unreasonable that a mint in Europe would vie for the rights to mint “specie” coinage for the fledgling new country. It is well known that “Gresham’s Law”, where bad money was driving out gold and silver, was operative in the colonies and in our new country, and this fact may have motivated foreign individuals to submit a coinage proposal on “speculation”. Before the end of the Revolution, there were coinage offers from England, specifically from Edward Bridgen in London, who later joined with John Waller in corresponding with Benjamin Franklin about supplying the

<sup>13</sup> Shane, Leo, Personal communication, July 2021.

<sup>14</sup> Casey, Julia, “The Letter from the Officer of the 64<sup>th</sup> Regiment was not About the 1776 Continental Dollar”, *The Journal of Early American Numismatics*, Vol.4, No. 1, June 2021.

<sup>15</sup> “Notes and Queries”, *American Journal of Numismatics* 26, No. 2, Oct. 1891.

<sup>16</sup> Kleeberg, John, “The Continental Dollar: British Medals or American Coin”, *The Journal of Early American Numismatics*, Vol. 1. No.2, pp.189-190, December 2018.

colonies with copper planchets or a copper coinage.<sup>17</sup> This proposal morphed into a dubious scheme and was firmly rejected by the Second Continental Congress. Additionally Frederick Walden, a ship captain, presented to the Confederation Congress in 1785 a plan in which he would mint halfpence and farthings in Sweden for the new United States.<sup>18</sup> Like the previous offer it was turned down, but the importance of this information is that foreign entrepreneurs *were proposing the production* of a coinage to the colonies and to independent America. Thus it is not out of the realm of possibility that these Continental Currency pieces were in fact a speculative proposition for a Federal coinage contract from England or elsewhere in Europe. Unfortunately, there is no primary or secondary documentation to support this line of reasoning, but nevertheless, it certainly is not without precedent.

Recently, Robert Leonard summarized his thoughts on these emissions:

*"In my opinion the Continental dollar is a speculation by a private mint (Rob suggests Germany in a previous post in the same E-Sylum but does not rule out other countries) in 1783 in the hope of obtaining a contract to strike coins for the United States, now that peace was finally at hand. The 1776 date was simply copied from Continental currency. The patterns were struck in pewter since it was anticipated that many would need to be distributed to members of Congress. If "E.G." can be identified we should be able to confirm this."*<sup>19</sup>

It appears to us and to others that some entrepreneurs, based upon the promise or conjecture of some American diplomat, could have thought that if they presented a ready-made mass of inexpensive coinage to a young nation with compelling and familiar iconography, then the country would jump at the chance to "check the box" and move on, the silver and brass pieces possibly being examples of what could be made in higher denominations. Maybe even a few hundred pieces were sent over to America as part of this proposal. This might account for some of the circulated examples. But like so many proposals from the likes of Hancock, Wyon, Getz, Atlee, Bailey, Mould, Simson, the Morris partnership, and others, this theory suggests that these Continental Currency pieces were possibly considered as well but obviously were never approved and thus relegated to tokendom. Perhaps the manufacturers of these pieces, having had some experience with medals such as the Felicitas Britannia medal, decided that Sarah Sophia Banks' advertisement was all that was left to them. Conceivably the rest slowly found their way into circulation or collections in America, Great Britain, and Germany, also explaining the not insignificant number of circulated examples.

We know that there are other individuals within the numismatic community with similar thoughts regarding these pieces who have not formally published their views. This article is intended to further advance and refine the thinking on these enigmatic pieces.

Having said all this, it seems perfectly reasonable to want to collect the Continental Currency pieces as enthusiastically as the Nova Constellatios, the Hancock Large and Small Eagles, the patterns of James Atlee and Walter Mould, and the list goes on, in any colonial collection.

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<sup>17</sup> Howes, Jack, James Rosen, and Gary Trudgen, *The History and Coinage of Machin's Mills*, Colonial Coin Collectors Club, 2020, p. 34.

<sup>18</sup> Ibid.

<sup>19</sup> Leonard, Robert, The E-Sylum, Vol. 24, No. 14, April 4, 2021.



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## THE CONTINENTAL DOLLAR, COIN OR MEDAL?

by Robert L. Rodriguez and Tony J. Lopez

### INTRODUCTION

I (RLR) assembled *The Resolute Americana Collection* six years ago; it is the most complete and among the finest collections of Continental Dollars. While pursuing this goal, I became impressed



by the number of metals used to coin them, their numerous die varieties and, most significantly, by their edge devices. In my opinion, all of these characteristics made them very special. Shortly after completing this collection, Catherine Eagleton published her paper raising issues as to what these enigmatic numismatic pieces might be.<sup>1</sup> Her conclusion that Continental Dollars were “perhaps” medals was predicated upon a notation by Sarah Sophia Banks at the British Museum in a catalog compiled by her around 1815. The key justification is an advertisement that refers to these as medals, along with a notation by Ms. Banks above it claiming, “Congress Dollar, 1776, never current, struck on speculation in Europe, for sale in America.” This text was copied from a note by Jonas Carl Dryander, librarian for Sir Joseph Banks, her brother.<sup>2</sup> There were no sources or dates for either of these notations. The catalog placement of these assertions also created confusion because the title page had been left blank, “as if these were objects that Sarah Sophia was unsure how to categorize,” according to Ms. Eagleton.<sup>3</sup> Others have challenged Ms. Eagleton’s conclusions including David F. Fanning<sup>4</sup> and John M. Kleeberg.<sup>5</sup> In private conversations I had at this



time with numismatist Stuart Levine and numismatic researcher Maureen Levine, we also considered the basis for her (Ms. Banks’) conclusion or speculation to be inadequate.

Erik Goldstein and David McCarthy provided their insights and arguments about Continental Dollars in their 2018 paper.<sup>6</sup> In it they ask this question, “What if they are just cheap European commemoratives, privately produced as little more than ‘for sale’ pieces of merchandise?”<sup>7</sup> And in Erik Goldstein’s follow-up paper,<sup>8</sup> he refers to them as “Continental Dollar medals.”<sup>9</sup> Over the past several years, there has been an ongoing debate as to the nature of the Continental Dollars: Are they a coin or are they a medal?

John M. Kleeberg addressed this question in his *JEAN* December 2018 paper, with the section titled, “The Continental Dollar: British Medals or American Coins?”<sup>10</sup> He briefly describes the characteristics of a medal. In his survey of 481 British medals, he raised many of the issues that have troubled me about this particular question and concluded that they do not correspond to British medals of the later eighteenth century. In light of this, my colleague, Tony Lopez, joined me in further investigating the nature of the Continental Dollars. We both viewed the assertions that these rarities may be medals had failed to address some basic elements of the Continental Dollar’s characteristics. At no point in their respective arguments did they ever address the following questions:

1. Catherine Eagleton, “Collecting America: Sarah Sophia Banks and the ‘Continental Dollar’ of 1776,” *Numismatic Chronicle* 174 (2014): 293-301.

2. *Ibid.*, 297.

3. *Ibid.*, 296.

4. David F. Fanning, “A Few Notes on Catherine Eagleton’s Numismatic Chronical Article on the Continental Dollar,” *The E-Sylum* (June 14, 2015): 12-13.

5. John M. Kleeberg, “The Continental Dollar: British Medals or American or American Coins?” *The Journal of Early American Numismatics* 1,2 (December 2018): 160.

6. Erik Goldstein and David McCarthy, “The Myth of the Continental Dollar,” *The Numismatist* (January 2018): 48-55.

7. *Ibid.*, 55.

8. Erik Goldstein, “The Myth of the Continental Dollar, Part 2,” *The Numismatist* (July 2018): 36-46.

9. *Ibid.*, 44.

10. Kleeberg, “The Continental Dollar,” 185-187.



- What is the nature of a medal?
- What are its characteristics?
- How does a medal differ from a coin?
- How might Continental Dollars be similar or different from medals?

We believe the first three questions can be answered as follows: a medal is typically in high relief and celebrates an event or person. The medal further informs the holder about the event or person on both sides and occasionally on its edge. They are usually struck in limited volumes and many are privately funded. The Scher Collection defines medals as follows: "Medals are solely commemorative in nature, can be commissioned by anyone, may be struck or cast, and need not conform to any standards or size, weight, or material."<sup>11</sup> The final question is what this paper intends to address.

In order to gain a better understanding of what the Continental Dollars might be, we turned our attention to the study of medals and their characteristics. By conducting an extensive quantitative survey of medals, we believed their characteristics could lead us to the answer. To accomplish this task, we reviewed several volumes about medals beginning with *American Colonial History Illustrated by Contemporary Medals* by Charles Wyllys Betts. It became clear that a more robust survey was in order, so the following four volumes listed below were included that would result in 4,672 medals being evaluated.

*British Commemorative Medals and Their Values*  
by Christopher Eimer

*Christian Wermuth a German Medalist of the Baroque age*  
by Cordula Wohlfahrt

*Medallic Illustrations Of The History Of Great Britain And Ireland*, The British Museum, H. A. Grueber

*Great Britain and Ireland and British Historical Medals 1760-1960*, Volume 1, by Laurence Brown

## MEDALS SURVEYS

Appendices 1-5 include the details of each of these surveys and are linked electronically, given the size of the respective spreadsheets that total 1,458 lines and up 21 columns of data. We believe this is one of the largest surveys of medals that has been undertaken.

The criteria that drove our evaluation process were the characteristics of the Continental Dollar themselves. These include:

- Three different metallic compositions
- Numerous die varieties
- Coin-style edge security devices

In our opinion, these key attributes have been overlooked or underappreciated. In particular, the lowly third side, the edge, has lost its importance, given that modern slabs make it difficult to truly appreciate this aspect of a medal or coin.

Our survey research evolved as we gained more insight about the nature and importance of certain characteristics. Initially, in Appendix 1 and 2, we included data regarding die varieties because there are many for the Continental Dollars. Betts provided relatively good information on this aspect, but, as we expanded our survey into British commemorative medals between 1695 and 1799, the accuracy of this attribute began to decline in the references we were using. As such, we then focused on the number of metals used in coining a specific medal and whether or not it had an edge device. When Christian Wermuth was added to the survey, covering a period from 1685 to 1739, we came to appreciate the differences in edge devices, so we returned to our initial surveys to quantify the type of edge device used. When these refinements were included, the nature and importance of the third side became immediately apparent.

We will discuss each of the five surveys that include a synopsis of each appendix, a brief commentary on 18th century tokens, and then provide a summary spreadsheet with the key data attributes and how these led us to our conclusion. We believe our data is overwhelming and provides a detailed view of the nature and differences between medals and the Continental Dollar.

To handle the various nuances of metallic compositions (metals) identified, broad categories were utilized that include the following:

- Pewter/White Metal
- Copper/Bronze/Brass
- Silver
- Gold
- No mention—we assume one metal

11. Stephen K. Scher, editor, *The Scher Collection of Commemorative Medals*, (New York: The Frick Collection, 2019), 15.

*American Colonial History Illustrated by Contemporary Medals,*

Charles Wyllys Betts, 1894. Appendix 1.

Exhibit 1

SUMMARY OF APPENDIX 1

		NUMBER OF METALS				NUMBER OF METALS WITH AN EDGE DEVICE	
	TOTAL	1	2	3	EDGE DEVICE	2	3
BETTS MEDALS	616	508	88	23	8	1	0
ADM. VERNON	167	157	10	0	0	0	0

Appendix 1 Link:

<https://www.dropbox.com/s/17mx4vpj1wnm6jq/APPENDIX%201%20MEDAL%20COMPARISON%20STUDY%20BETTS%20FINAL.xlsx?dl=0>

Since the Continental Dollars have designs, inscriptions, and legends which clearly pertain to the 1776 Independence of the United States, Betts provided a good starting point for our study. There were 616 medals evaluated, with seven excluded because of a lack of sufficient data. This total increased to 753, when metallic composition was considered. Medals coined in pewter/white metal and gold represented 39 and 33, while 327 and 337 were in copper and silver. When the number of metals was used as a qualifier, those made in two or three metals fell to 88 and 23, respectively. These totals were further reduced to 43 and 6, when two or three die varieties were added as criteria. The inclusion of an edge device dramatically reduced the total number of qualifiers to just 8, with

only one in two metals and none in three, without any consideration for die varieties.

As an example of a “cheap” medal, we reviewed the ubiquitous Admiral Vernon medal. It was the most widely produced medal of the time and numerous other types of collectibles were produced to celebrate the event. A total of 167 were included in Betts, with 157 in a single metal and only 10 in two metals. We also reviewed Adams and Chao’s work on Admiral Vernon medals.<sup>12</sup> This expanded the Vernon sample by 95. As in Betts, the number of medals produced in two metals fell dramatically from 217 in one to 45 in two. None of these medals included an edge device, so the entire group was disqualified because of this one key attribute.

		NUMBER OF METALS				NUMBER OF METALS WITH AN EDGE DEVICE	
	TOTAL	1	2	3	EDGE DEVICE	1	2
ADAMS and CHAO VERNON MEDALS	262	217	45	0	0	0	0

12. John W. Adams and Fernando Chao, *Medallic Portraits of Admiral Vernon: Medals Sometimes Lie* (Gahanna, OH: Kolbe & Fanning, 2010)

With this initial foray, the significance of an edge device became very important, in our opinion. At this point, we still had something to learn about edged device differentiation.



*British Commemorative Medals and Their Values,*  
Christopher Eimer, 2010. Years 1695-1799. Appendix 2.

## Exhibit 2

## SUMMARY OF APPENDIX 2

		NUMBER OF METALS					NUMBER OF METALS WITH AN EDGE DEVICE			
	TOTAL	1	2	3	4	EDGE DEVICE	1	2	3	4
BRITISH COMM.	494	119	225	133	17	20	3	9	8	0

## Appendix 2 Link:

<https://www.dropbox.com/s/355558tjqt527ax/MEDAL%20COMPARISON%20STUDY-BRITISH%20COMMEMORATIVE%20MEDALS%2C%20APPENDIX%20%202%20FINAL.xlsx?dl=0>

When we delved into this volume, we soon learned there was little or no information about die varieties. General comments were made but they were inadequate for quantification purposes. We needed to reform our thinking; thus, this metric would be excluded from the qualifying criteria. Our focus was now on the number of metals used to coin a specific medal and if it had an edge device. 494 medals were evaluated and 61 duplicates were eliminated

from those covered in Betts. Metallic composition increased this total to 1,036. Copper and silver were almost equal at 402 and 404, while pewter/white metal and gold accounted for 126 and 102, respectively. Only 20 medals had an edge device and this total was further reduced to 9 and 8 for those in two and three metals. If two and three die varieties were to be considered in two and three metals, only 2 and 1 would then qualify.

*Christian Wermuth, 1685-1739,*  
Cordula Wohlfahrt, 1992. Appendix 3.

## Exhibit 3

## SUMMARY OF APPENDIX 3 EDGE DEVICES ONLY

		EDGE TYPE			NUMBER OF METALS WITH AN EDGE DEVICE		
	TOTAL	LATIN	GERMAN	COIN-STYLE	1	2	3
CHRISTIAN WERMUTH	209	177	6	26	203	4	2

## Appendix 3 Link:

<https://www.dropbox.com/s/59xsxu2zhlh3ecy/MEDAL%20COMPARISON%20STUDY%20CHRISTIAN%20WERMUTH%2C%20APPENDIX%203%20FINAL.xlsx?dl=0>

The prodigious medallic work of Christian Wermuth changed our thinking about how to proceed and required a re-evaluation of both Appendix 1 and 2. Of the 1,488 medals that Wermuth designed, 209 included an edge device. This was a completely different outcome from our first two surveys. His edge devices included Latin, German and Coin-Style--reeded/milled or engrailed. The primary metal utilized was silver, which accounted for 163 medals. White metal, Bronze/Copper, Gold and No Mention,

represented 17, 10, 1 and 25, respectively. Those coined in two or three metals fell to 4 and 2 and they were all with Latin inscriptions. From this evaluation, we learned the type of edge device was becoming critical to understanding the nature and importance of what it represented; therefore, we returned to Appendix 1 and 2 to detail those with edge devices in Latin, English/German and Coin-Style--reeded/milled or engrailed.

*Medallic Illustrations of the History of Great Britain and Ireland,*  
The British Museum, H. A. Grueber, September 1911, Reprinted 1979. Appendix 4.

**Exhibit 4**

**SUMMARY OF APPENDIX 4 EDGE DEVICES ONLY**

		EDGE TYPE			NUMBER OF METALS WITH AN EDGE DEVICE			
	TOTAL	LATIN	ENGLISH	COIN-STYLE	1	2	3	4
MEDALLIC ILLUSTRA.	34	32	2	0	19	12	2	1

**Appendix 4 Link:**

<https://www.dropbox.com/s/z1jowr8ob2w1qu1/MEDAL%20COMPARISON%20STUDY%20MEDALLIC%20ILLUSTRATIONS%2C%20APPENDIX%204%20FINAL.xlsx?dl=0>

A total of 1,683 medals between 1660 and 1760 were reviewed. Only 34 included an edge device, with Latin accounting for 32 and none were of the Coin-Style

variety. When medals described in multiple metals were considered, those in three or four metals fell to 2 and 1, respectively.

*GREAT BRITAIN AND IRELAND AND BRITISH HISTORICAL  
MEDALS 1760-1960, VOLUME 1,*  
Laurence Brown. 1980. Appendix 5.

**Exhibit 5**

**SUMMARY OF APPENDIX 5 EDGE DEVICES ONLY, 1760-1799**

		EDGE TYPE			NUMBER OF METALS WITH AN EDGE DEVICE		
	TOTAL	LATIN	ENGLISH	COIN-STYLE	1	2	3
HISTORICAL MEDALS	6	2	4	0	1	3	2

**Appendix 5 Link:**

<https://www.dropbox.com/s/o09h7hf4q188zpe/MEDAL%20COMPARISON%20STUDY%20BRITISH%20HISTORICAL%20MEDALS%2C%20%20APPENDIX%20%205%20FINAL.xlsx?dl=0>

Only six additional medals were added after duplicates were eliminated from the 481 medals reviewed between 1760-1799. Laurence Brown set out to cover the medals issued after the death of George II. Only medals personally examined by him were included. He was also given the privilege of being able to inspect Her Majesty the Queen's numismatic collection at Windsor Castle. Of particular interest to us were his comments in the introduction that reference Betts-614, when compared to those of Erik Goldstein.

Mr. Goldstein asked this question, "How do these Continental Dollar medals relate to the pewter 'Felicitas Britannia et America' medals (Betts-614) struck in England after September 1783? Not only

do the two share a common reverse design and lack a copper 'scavenger,' but both also have milled edges, making them strikingly similar."<sup>13</sup> He then asserts, "This pewter Felicitas Britannia et American medal (Betts-614) was struck in England in late 1783. Its reverse design is the *same as that on most Continental Dollars*,<sup>14</sup> and the piece features a milled edge."<sup>15</sup> Which is it? Are they the "same" or are they "strikingly similar?" A simple visual comparison between them clearly shows their differences. Our forthcoming Betts-614 census study paper of sixteen

13. Goldstein, "The Myth of the Continental Dollar, Part 2," 44.

14. Italicized for emphasis.

15. Ibid., 44.



medals clearly supports this viewpoint. In contrast to Mr. Goldstein's views, Mr. Brown states, "The very crude medal for the Peace of Versailles in 1783 was struck in America—the English saw little to celebrate in the loss of the thirteen colonies so that no comparable English medal exists for this occasion."<sup>16</sup> The description for medal #256, Betts-614, the British Museum's specimen, states, "This piece was probably struck in America and is included here for the sake of completeness."<sup>17</sup> Thus, there is a divergence of opinion as to where this medal was actually struck. Mr. Goldstein provides no supporting evidence for his assertion that this medal was struck in England in late 1783. In our opinion, given its crudeness of execution, it is more likely of a colonial origin than British origin.

## 18th CENTURY TOKENS

We did consider 18th century tokens since they were used in commerce and many have edge devices. During the period of 1786 and 1797, tokens were issued in England, given the shortage of copper coin. "The copper currency of this country, towards the end of the eighteenth century was in such a neglected condition, by reason of the meager supply, and the very inferior quality of the design, that tons of imitation regal half pence and farthings were in circulation."<sup>18</sup> These tokens were initially categorized by James Conder and are commonly referred to as "Conder Tokens." A token of this era typically has a limited use and is generally issued by a private company, group, association or individual. They usually reference a merchant, with a value either on the obverse or reverse and a place for redemption that could also be stamped on its edge. Some were produced in two metals, usually copper and silver, and their diameters were considerably smaller, while

their quality of execution was typically far superior to the Continental Dollars, as a review of 3,755 clearly showed.<sup>19</sup> Though they were used as a form of coinage, Bill McKivor states, "18th Century tokens are not coins..."<sup>20</sup> We place tokens in a different category from those of coins and medals and, as such, they were excluded from our surveys.

## SUMMARY AND CONCLUSIONS

The critical points of this medal survey are brought together in Exhibit 6. By studying the nature and characteristics of medals, we have gained a better understanding of the differences between medals and coins and, into which category the Continental Dollars should be placed. The importance of the edge device was clearly demonstrated by this survey of 4,672 medals. Of the 278 with an edge device, 232 were in Latin, while another 15 were in either German or English. Coin-Style devices accounted for only 31 or 0.66% of the those surveyed. This meager percentage surprised us. In total, 42 medals were struck in either two or three metals.<sup>21</sup> However, for those having a Coin-Style edge device, only two were struck in two metals, silver and copper, while none were in three metals. Given this data, we are highly confident in stating the characteristics of the Continental Dollar are UNIQUE, when compared to medals, given they were struck in three metals and have a Coin-Style edge device. If die varieties were able to be included as another qualifier, this would likely differentiate Continental Dollars to an even greater extent. In light of the overwhelming weight of this data, we believe it clearly supports our conclusion that the Continental Dollar is a coin and not a medal. We believe the debate should now shift to one of what type of coin it is and where it was likely struck.

16. Laurence Brown, *British Historical Medals 1760-1960, Volume 1* (1980), xiv.

17. Ibid., 61.

18. D. Dalton & S. H. Hamer, *The Provincial Token-Coinage of the 18th Century* (Gettysburg, PA: Thomas Publications and William J. McKivor, 2015), 1. First printed in 1910.

19. Bill McKivor, editor, "The Provincial Token-Coinage of the 18th Century," R. Dalton & S.H. Hamer, 1910-1918. Reprint, The Copper Corner, 2015.

20. Ibid., xiv.

21. Eimer, *British Commemorative Medals and Their Values* (London: Spink & Son Ltd., 2010), Appendix 2, #449 and #455.

## Exhibit 6

### SUMMARY EDGE TYPE ANALYSIS

EDGE TYPE ANALYSIS	TOTAL EDGE DEVICES	2 METALS	3 METALS	TOTAL 2 AND 3 METALS
<b>LATIN INSCRIPTION</b>				
BETTS — APPENDIX 1	5	1	0	1
BRITISH COMMEMORATIVE MEDALS — APPENDIX 2	16	5	8	13
CHRISTIAN WERMUTH — APPENDIX 3	177	4	2	6
MEDALLIC ILLUSTRATIONS, GREAT BRITAIN AND IRELAND — APPENDIX 4	32	10	1	11
BRITISH HISTORICAL MEDALS 1760–1960— APPENDIX 5	2	1	1	2
<b>TOTAL LATIN INSCRIPTION</b>	<b>232</b>	<b>21</b>	<b>12</b>	<b>33</b>
<b>ENGLISH/GERMAN INSCRIPTION</b>				
BETTS	0	0	0	0
BRITISH COMMEMORATIVE MEDALS	3	2	1	3
CHRISTIAN WERMUTH	6	0	0	0
MEDALLIC ILLUSTRATIONS, GREAT BRITAIN AND IRELAND	2	1		1
BRITISH HISTORICAL MEDALS 1760–1960	4	2	1	3
<b>TOTAL ENGLISH/GERMAN INSCRIPTION</b>	<b>15</b>	<b>5</b>	<b>2</b>	<b>7</b>
<b>COIN STYLE (MILLED/GRAINED/ENGRAILED)</b>				
BETTS	3	0	0	0
BRITISH COMMEMORATIVE MEDALS	2	2	0	2
CHRISTIAN WERMUTH	26	0	0	0
MEDALLIC ILLUSTRATIONS, GREAT BRITAIN AND IRELAND	0	0	0	0
BRITISH HISTORICAL MEDALS 1760–1960	0	0	0	0
<b>TOTAL MILLED/GRAINED/ENGRAILED</b>	<b>31</b>	<b>2</b>	<b>0</b>	<b>2</b>
<b>TOTAL ALL EDGE DEVICES</b>	<b>278</b>	<b>28</b>	<b>14</b>	<b>42</b>
<b>MEDALS SURVEYED</b>				
<b>TOTAL</b>	<b>616</b>			
BETTS	404			
BRITISH COMMEMORATIVE MEDALS	1488			
CHRISTIAN WERMUTH	1683			
MEDALLIC ILLUSTRATIONS, GREAT BRITAIN AND IRELAND	481			
BRITISH HISTORICAL MEDALS 1760–1960	4672			

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## **ANNOUNCEMENTS**

### **C4 Membership Dues**

Annual dues are currently \$30.00 for Regular Membership (\$40 if residing outside the United States) and \$10.00 for Junior Membership (under 18 years of age; \$15 if non-US resident.) They are payable on a calendar year basis... due January 1. The year through which you are paid appears after your name on the mailing address label on the *C4 Newsletter* envelope. Life Memberships can be purchased for 25 times the annual membership cost, or \$750.00. You may mail checks (made out to "C4") to: Charlie Rohrer, C4 Treasurer, P. O. Box 25, Mountville, PA 17554

Thank you for paying in a timely manner... It makes his job easier and will be much appreciated!

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### **C4 25<sup>th</sup> Anniversary Medals**



A limited number of medals are still available. Individual copper medals can be purchased for \$13, and silver (one ounce, .999 silver) medals can be purchased for \$43, or a set containing one of each for \$48. These prices include postage.

If included along with an initial order, above, additional individual copper and silver medals are \$8 and \$35, respectively. Additional sets can be purchased for \$40 per set as long as they are included with an initial order, to save on postage.

Checks should be made payable to C4 and mailed to Charlie Rohrer, C4 treasurer, P.O. Box 25, Mountville, PA, 17554.

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## C4 LIBRARY NEWS

(Leo Shane)

I am happy to report that the C4 Library has been contacted by the curator of the Newman Numismatic Library with an offer to acquire any remaining books from Eric's Library. These will be donated free of charge and will be available for C4 and EAC Members to borrow. I have already picked up 6 boxes of books and hope to get more during a second visit to St. Louis in May 2022. The list below does not yet include any of the books acquired from the Newman Library. These will be announced in upcoming C4 Newsletters.

Below are new items acquired by the club or donated since the last C4 Library Update. They are now available for loan by all C4 and EAC members in good standing. A complete list of library holdings and instructions on how to borrow them is available at the C4 website : [www.colonialcoins.org](http://www.colonialcoins.org). Thank you to all who have donated items.

Thank you to those who have checked their old copies of auction catalogs and donated them to the library. There's still room for more. The C4 Library is interested in getting copies of past auction catalogs that we currently do not have. Take a look at the list shown on the club website. Any that are not already in the library are greatly appreciated. Remember, all catalogs that have at least one colonial will have the colonial section separated and added to the library archive. Catalogs with major colonial content will be retained in their entirety. Thanks.

### Books, Manuscripts, & Auction Catalogs:

Davis, Andrew McFarland, *Colonial Currency Reprints 1682-1751* (Four Volume Set), Augustus M. Kelley Bookseller, New York, NY, 1964 – Donated by Laurence Edwards

Mossman, Philip L, *From Crime to Punishment*, The American Numismatic Society, New York, NY, 2013 – Donated by Laurence Edwards

Scott, Kenneth, *Counterfeiting in Colonial Rhode Island*, The Rhode Island Historical Society, Providence, RI, 1960 – Donated by Martin Smith

Bowers, Q. David, *Whitman Encyclopedia of Colonial and Early American Coins*, Whitman Publishing LLC, Atlanta, GA, 2009 – Donated by Martin Smith

Bowers, Q. David, *Coin Collecting – Those Who Led the Way*, Published by Stacks Bowers Galleries, New York, NY, 2020 – Donated by Craig McDonald

Spilman, J. C., *The Colonial Newsletter* (15 Issues from Vol 5 No.1, August 1963 to Vol 38 No.3, December 1998) – Donated by Charles Mamiye

McDowell, Christopher R., *Abel Buell and the History of the Connecticut and Fugio Coinages*, C4 Publications, 2015 – Acquired by C4

Martin, Sydney F., *Saint Patrick Coinage for Ireland and New Jersey*, Published by the Colonial Coin Collectors Club (C4), 2018 – Acquired by C4

American Numismatic Association, *Proceedings of The American Numismatic Association Convention – 1942*, Published by The American Numismatic Association, 1942 – Donated by the Newman Numismatic Library

Sedwick, Daniel Frank, *Treasure and World & U.S. Coin and Paper Money Auction 29*, 7-8 & 10 May 2021, Winter Park, FL – Donated by Daniel Sedwick

Bowers and Merena, *The Norweb Collection – Canadian and Provincial Coins*, 15 November 1996, Baltimore, MD – Donated by Leo Shane

Stacks Bowers, *The D. Brent Pogue, Henry and BSC Collections – U.S. Coins and Exonumia*, 7, 10-11 August 2020, Las Vegas, NV – Donated by Stacks Bowers

Stacks Bowers, *The June 2021 Auction featuring the Lulu, Silas Stanley Roberts and Norman Peters Collections*, 10-11 & 14-16 June 2021, Costa Mesa, CA – Donated by Stacks Bowers

Kagin's Inc., *Kagin's March 2021 Auction*, 11-12 March 2021, San Francisco Bay Area, CA – Donated by Kagin's Inc.

#### C4 Library Research Challenge: – Leo Shane

One of our members (Rich Ippolito) has donated to the C4 Library, two Sets of CDs which contain hundreds of numismatic files. These were identified in a previous C4 Library Update. Many files relate to American coins and currency while others are for ancient and world coins.

I am looking for someone with the interest to research these CDs and index and possibly sort these files in a way that C4 members can more easily find files related to colonial topics. It is a worthwhile project that will be appreciated by me and anyone else trying to use these files.

Let me know if you are interested. Thank You.

Leo  
Leo\_J\_Shane@hotmail.com

## **Newman Numismatic Portal Symposium Videos Available**

Videos from the recently conducted Newman Numismatic Portal (NNP) Symposium are now available on the Newman Numismatic Portal at <https://nnp.wustl.edu/library/multimediadetail/539070>. The NNP Symposium, held August 28-30, featured an online series of numismatic presentations over a three-day period. The event, which drew over a thousand registrants, included forty-one sessions and presented a wide array of content, including American, world, and ancient numismatics. This event was produced by Lianna Spurrier of Numismatic Marketing, under sponsorship of the Eric P. Newman Numismatic Education Society.



Attendee input was enthusiastic, with one viewer noting “Drive time was very short, parking was free, food options were plentiful and reasonably priced, and overnight accommodations were like sleeping in my own bed.” Another commented “I just want to tell you what a fabulous event the Symposium was, as I’m sure you have heard a hundred times. It was an oasis in the COVID-19 desert. It got the coin collecting juices flowing again for those of us hunkered down waiting for the next show.” Other comments received included “These last three days were the closest I’ve come to having a coin convention experience since before the coronavirus hit” and “The NNP hit a homerun with its effort. The symposium was such a success that I hope the NNP makes this an annual event.”

Popular sessions included Greg Rohan, of Heritage Auctions, who discussed the impact of the COVID epidemic on the numismatic market. Charles Morgan presented on “Five Ways to Modernize the Rare Coin Market,” while Matthew Tavory and Isaiah Hagemen hosted a well-received discussion on detection of counterfeit slabs. Rounding out the most attended presentations, Robert Rodriguez spoke on the “The 1792 Morris ‘So-Called’ Silver Center Cent.”

The growth of online numismatics mirrors that of nearly every other industry, and the unique circumstances of the present epidemic make events such as Newman Numismatic Portal Symposium particularly appropriate in the present environment. “I was encouraged to see the numismatic community come together in this way,” noted Len Augsburger, Project Coordinator for the Newman Numismatic Portal. Andy Newman, Trustee of the Eric P. Newman Numismatic Education Society, commented “There appears to have been an appetite for numismatic content presented in this format, so we are encouraged to continue facilitating such events and welcome suggestions for improvement.”

Comments regarding this or future events are welcome by email, at [NNPCurator@wustl.edu](mailto:NNPCurator@wustl.edu).

## **C4 Offers Important Colonial Books**

For more information on the following books, published by the Colonial Coin Collectors Club (C4,) visit the C4 website at [www.colonialcoins.org](http://www.colonialcoins.org). These books may be ordered directly from: Charles Davis' website: [www.numisbook.com](http://www.numisbook.com).

(1) Howes, Jack, Rosen, James and Trudgen, Gary. *The History and Coinage of Machin's Mills*, Colonial Coin Collectors Club, 2021. Price: \$85. This title also available from Kolbe & Fanning Numismatic Booksellers.

(2) Jordan, Lou. *John Hull, The Mint, and The Economics of Massachusetts Coinage*, Colonial Coin Collectors Club, 2002. Price: \$10.

(3) McDowell, Christopher R., *Abel Buell and the History of the Connecticut and Fugio Coinages*, Colonial Coin Collectors Club, 2015. Price \$85.

(4) Martin, Sydney. *French Coinage Specifically for Colonial America*, Colonial Coin Collectors Club, 2016. Price \$85.

(5) Martin, Sydney. *The Hibernia Coinage of William Wood (1722-1724)*, Colonial Coin Collectors Club, 2007. Price: \$50.

(6) Martin, Sydney. *The Rosa Americana Coinage of William Wood*, Colonial Coin Collectors Club, 2012. Price \$50.

(7) Martin, Sydney. *St. Patrick Coinage for Ireland and New Jersey*, Colonial Coin Collectors Club, 2018. Price \$95.

(8) Moore, Roger. *The Coins of Colonial Virginia*, Colonial Coin Collectors Club, 2019, Price \$95.

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## **THE C4 NEWSLETTER IS ON THE NEWMAN NUMISMATIC PORTAL!**

Past issues of The C4 Newsletter, and a plethora of other important numismatic resources are now available online, through The Newman Numismatic Portal, at:

[www.archive.org/details/newmannumismatic](http://www.archive.org/details/newmannumismatic)

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## **RESOURCE FOR THE C4 NEWSLETTER**

Our C4 Newsletter now has an index available on our website at [www.colonialcoins.org](http://www.colonialcoins.org).

There are two indexes: one by author and a second by topic/title. This is a beginning and the index will improve over time. We have intentions of updating the index within a week or two of every issue being shipped. We ask past authors and contributors to the C4N to please review their work in the index and forward any corrections/additions/suggestions to Ray Williams at [nraywms@optonline.net](mailto:nraywms@optonline.net) or call.



## Important Vermont Ryder-3 Study

Mark Vitunic and Jim Glickman are conducting a study of Vermont Ryder-3 specimens with planchet/striking peculiarities such as oblongness and partial doubling as described in Carlotto. This effort will hopefully lead to a C4N article. We are asking C4 members to please email us photos + weight of ANY Ryder-3 specimen that you own or are aware of which is NOT currently listed in the HA/SB archives. Your anonymity guaranteed. Thank you! [mvitunic@gmail.com](mailto:mvitunic@gmail.com), [jamesglickman1@gmail.com](mailto:jamesglickman1@gmail.com).

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The American Numismatic Society lacks just 10 pieces of Continental Currency for a complete set. If you would like to donate to the study collection, please contact Curator of the Americas, Jesse Kraft, at [jkraft@numismatics.org](mailto:jkraft@numismatics.org). The missing notes are as follows:

February 26, 1777, \$2, Friedberg.55 — May 20, 1777 \$4 Friedberg.65 — May 20, 1777, \$5, Friedberg.66 — May 20, 1777, \$7, Friedberg.68 — May 20, 1777, \$8, Friedberg.69 — April 11, 1778, \$6, Friedberg.73 — April 11, 1778, \$7, Friedberg.74 — April 11, 1778, \$8, Friedberg.75 — April 11, 1778, \$20, Friedberg.76 — April 11, 1778, \$40, Friedberg.78

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The Daniel Frank Sedwick database of fake cobs is now on ForgeryNetwork:  
<http://www.forgerynetwork.com/default.aspx?keyword=cob>

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## PROSPECTIVE MEMBERS

In accordance with our by-laws, those who have recently joined C4 as provisional members are listed below. If any current C4 member in good standing has a reason any of the following should be denied membership in C4, please contact either your Regional VP or the President of the Club, Craig McDonald. The new provisional members are:

Larry Briggs - OH  
Ronald Flodquist - MA

Michael Gronbach - OH  
Rich Nadeau, Jr. - MA  
Ed Nicolai - OR

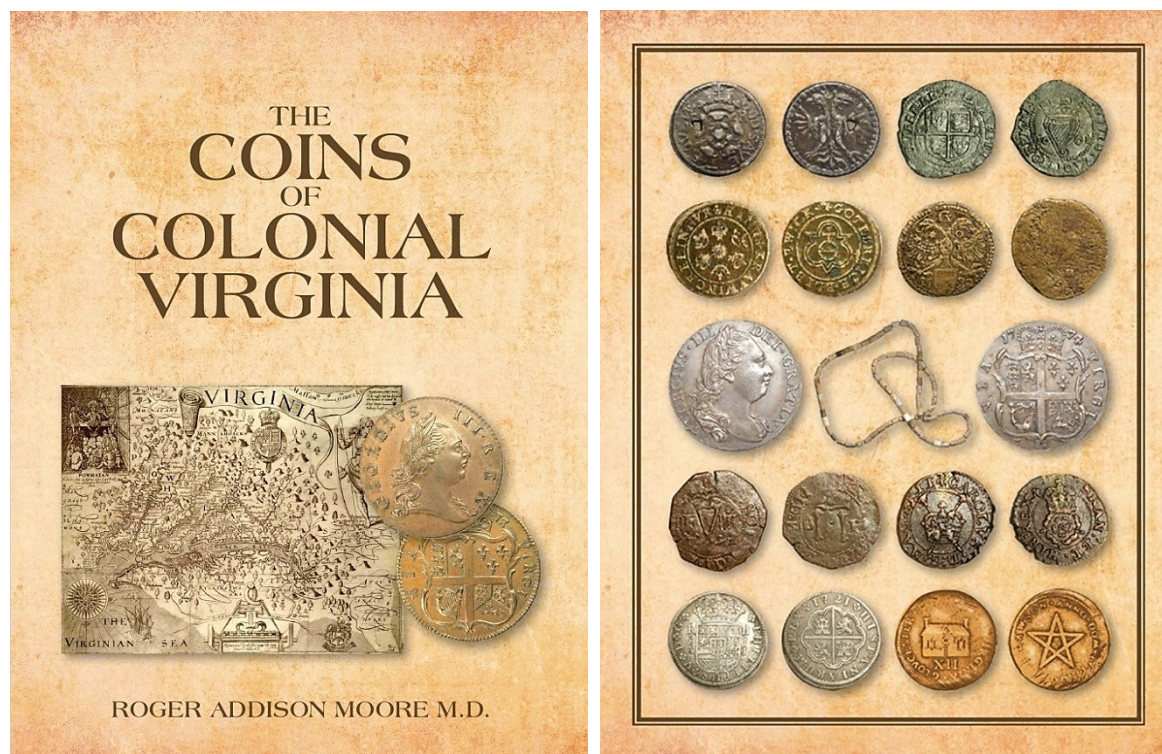
Jack Pisani - PA  
David Schenkman - MD

\*\*\*\*\*

I am in the process of researching information pertaining to the Talbot, Allum & Lee series. I am seeking assistance from C-4 members who may have knowledge regarding the evolution of the series and the coins that were issued. I possess the basic series including all mules. If you have any unique or off metal pieces, or a half cent struck over a Talbot piece I would love to have access to them if possible.

Please contact Arnold Miniman at [ahminiman@gmail.com](mailto:ahminiman@gmail.com), or (201) 317-4199.

***C4 Proudly Announces a New Book  
By Roger A. Moore!***



The growth and development of Virginia into one of the most important North American colonies can be traced by the economic evolution of the Dominion State as it attempted to gain the necessary hard currency needed for commerce. The history surrounding the introduction of various coinages and the use of tobacco as a commodity currency over the 150 years leading up to the final authorization of the production of Virginia halfpence in 1773 is fascinating. Equally as absorbing are the twists, turns, and dead ends encountered by the Virginia colonists as they sought authorization from the English Crown for their own coinage. It is ironic that the long-desired copper Virginia halfpence finally provided to Virginia under Warrant from King George III became available to the colonists only fifty days before the beginning of the American Revolution.

In addition to exploring the historic context in which colonial Virginia struggled to obtain hard currency, methods are provided for attributing and collecting the 30 known die varieties of the 1773 copper Virginia halfpence. The book also enumerates the specifics of the Virginia halfpence metrology, rarity, and grading, as well as their numerous forgeries, facsimiles, fantasies, and oddities. Virginia halfpence can be appreciated and collected in nearly uncirculated condition and are important additions to any collection of American colonial coins.

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Obverse Matrix of the Virginia halfpence

Price: \$95. Available beginning at the C4 Convention, November 14-17, 2019, from Charles Davis. Orders may be placed at Post Office Box 1; Wenham, MA 01984. Telephone: (978) 468 - 2933; Fax (978) 468 - 7893; E-mail: [numislit@aol.com](mailto:numislit@aol.com); Business Hours: Monday - Friday 8:00 – 5:00 EST.

The Colonial Coin Collectors Club announces a 2<sup>nd</sup> printing:  
**CONTEMPORARY COUNTERFEIT HALFPENNY AND  
FARTHING FAMILIES, 2<sup>nd</sup> PRINTING**

By Roger Moore, Eugene Andrews, Robert Bowser, John Howes, John Louis, David Palmer, Jeff Rock, Rickie Rose, Clem Schettino, and Byron Weston

This monograph is the start of an effort to organize and bring structure to this area of colonial numismatics: it breaks down the vast number of different varieties into related groups called Families. A Family of contemporary counterfeits is a group of coins that likely came from the same minting operation at about the same time. Families are logical groups that share one or more of the following attributes: dies, die making punches, or similarities in the design style. This updated large format, glossy, 294-page and profusely illustrated in color hardcover is available from Barnes & Noble, Amazon books, and other mass market retailers. Check specifically for ISBN 978-1-64255-857-9.

Comments on *Contemporary Counterfeit Halfpenny and Farthing Families*:

Jim Rosen, Past President, Colonial Coin Collectors Club, Inc.:

“Finally, a wonderful and badly needed reference book of extraordinary importance that for the first time begins the monumental task of putting order to the unorganized field of counterfeit halfpence and farthings.”

**Contemporary Counterfeit  
Halfpenny & Farthing Families**

By Roger Moore, Eugene Andrews, Robert Bowser, John Howes, John Louis,  
David Palmer, Jeff Rock, Rickie Rose, Clem Schettino, and Byron Weston



This book is the start of an effort to organize and bring structure to this area of colonial numismatics.

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**New Fixed Price List from Eugene T Yotka Rare Coins.** This fully illustrated catalog contains a nice selection of New Jersey Coppers, some beautiful Connecticut Coppers, Massachusetts, and Vermont, as well as Colonial Currency and Numismatic Literature and much more. To order yours today simply email your request to [etyrarecoins@gmail.com](mailto:etyrarecoins@gmail.com) or call us at 321-759-5760 and we will email your copy right away.

\*\*\*\*\*

**For Sale to a Good Home: Must provide References of Good Care of Colonials**

Continental Currency, 2 November 1775, \$8, Choice AU, No Folds, Pinholes or any other problems  
Continental Currency, 14 January 1779, \$70, Nice AU, No Folds or Pinholes



New York Currency 16 February 1771 £5, AU with a light fold, Bold Print, Clean Note, Small repair at front bottom center. Elaborate Top Boarder.

1787 Conn. Mi-1.1a, F-15, smooth surfaces, Nice Coin in a collectible Grade, Small Head Type

1787 Conn. Mi-1-1a, VF with obv roughness, net F-15, Pleasant Looking Coin, Small Head Type

1794 Ready Reckoner, Daniel Fenning, Newburyport MA., Cover and some pages detached but all are present, contains a Coin Table.

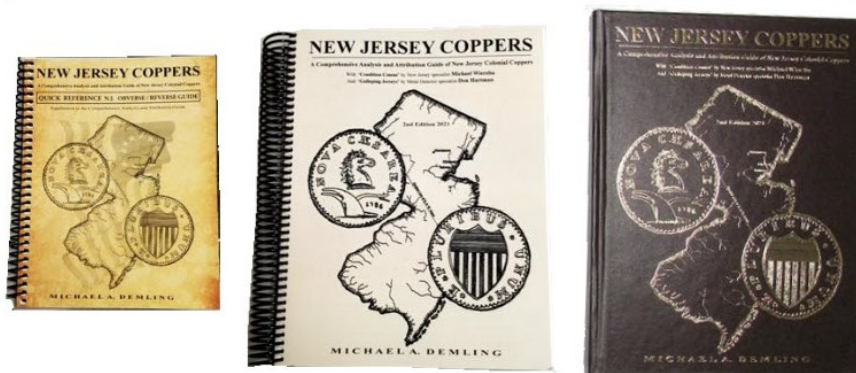
Also, some Non Colonials (Including Coin World Tokens) For Sale, Let me know your interests.

Call/Email for prices & pictures. [Leo\\_J\\_Shane@hotmail.com](mailto:Leo_J_Shane@hotmail.com) 215-873-1915

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## **C4 MEMBER MICHAEL DEMLING ANNOUNCES TWO NEW BOOKS**

**New Jersey Coppers Attribution Guide Second edition  
and a reduced size New Jersey Coppers Quick Reference**



It has been over eleven years since the popular New Jersey Copper Attribution Guide by Michael Demling was introduced. This book assisted all colonial coin collectors in a easy and quick method to attribute New Jersey Coppers. The book has been sold out for several years and because of its popularity the author wrote a new second edition, 333 pages with updated information, new varieties discovered, Counterfeits, electros and copies, along with chapters by two guest authors. Michael Wierzbowski's "Condition Census" and Don Hartman's "The Galloping Jerseys."

The second book "New Jersey Coppers Quick Reference Guide" includes all the tools to properly and easily attribute the 149 New Jersey varieties. 128 pages in a reduced 6X8 format. Showing all die combinations for both Obverse and reverse Maris dies.

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## **Obtaining Back Copies of C4 Newsletter and C4 Auction Catalogues**

Wayne Shelby has agreed to store the back copies of the *C4 Newsletter*. People wishing to purchase back issues that are still available should send their money to our treasurer, Charlie Rohrer, whose contact data are at page 2. Upon receipt of the money, he will contact Wayne, who will mail out the material. Back copies of the *Newsletter* are \$10 for the first and \$8 for all after that placed at the same time. If you have questions of what material is available, you can contact Wayne at:

[dughistory@juno.com](mailto:dughistory@juno.com)

609-261-6662 (Home)



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I'm currently undertaking a comprehensive study of the Castorland jeton. I'm approaching the study from both sides of the Atlantic, relying heavily on French sources, and my study entails operational details from the manufacture of flans to the mechanical workings of the screw press; the history of jetons as they evolved from arithmetical counters to monarchical presentation pieces; events leading up to the establishment of the New York Company; the biography of Benjamin Duvivier; etc. culminating in detailed descriptions of variants struck from at least one original die. As you can see it's a big work, but I've been at it quite a few years and am wonderfully engaged in the project. Here is a "finding list" of details I'm looking for, as well as photos if possible:

1. If the specimen is in a slab, all the label information.
2. Identify the metal, gold, silver, copper, bronze. If silver, indicate thin or thick planchet.
3. If edge-stamped, identify the symbol and the lettering and location of the stamping (such as 6 o'clock relative the obverse.)
4. Die alignment: coin turn/medal turn.
5. Describe state of any reverse die failure, perceptible bulge, advanced crack, etc.
6. Describe reverse caustic incursion, sometimes identified as rust, at the right handle of the vessel.
7. Describe any other identifying factors such as rim bumps, scratches, spots, unfilled letters of legends, etc. that would help identify the piece if it were re-encapsulated at some future time.
8. Indicate the provenance, if known. If you currently own the specimen, feel free to identify it ex your name for the benefit of future owners.

Please contact Chester L. Sullivan at csull@ku.edu.



Massachusetts Silver NE Shilling, Sixpence, and Threepence  
 Photo Courtesy Massachusetts Historical Society  
 See Anne Bentley interview by Jeff Burke in the Summer 2021 issue of C4N

## CLASSIFIED ADS

Grayscale ads for this newsletter can be purchased as follows (color ads are 50% more in each category):

|          | 1 issue | 2 issues | 3 issues | 4 issues | Copy Size |
|----------|---------|----------|----------|----------|-----------|
| 1 page   | \$300   | \$450    | \$600    | \$750    | 6" x 9"   |
| 1/2 page | \$175   | \$250    | \$325    | \$400    | 6" x 4.5" |

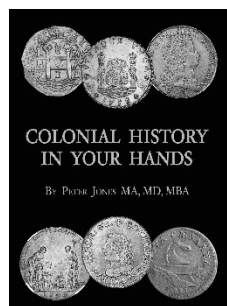
Covers cost somewhat more (please inquire – generally \$200 additional.) Please send check with your ad. We accept camera-ready copy or any Microsoft Word compatible computer file.

All members also have the right to include a free classified ad in the newsletter of up to 10 lines of text.

NOTICE: The Colonial Coin Collectors Club does not review the ads provided for accuracy, nor does it assess any items offered for sale relative to authenticity, correct descriptions, or the like. C4 is not to be considered a party to any transactions occurring between members based on such ads and will in no way be responsible to either the buyer or seller.

**EDITOR NOTE: Starting with the Winter 2021 issue, Classified Ads that have run for four consecutive issues will be discontinued unless instructed otherwise by the advertiser.**

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1712 D Lyon 30 Deniers	\$30

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I present new information about how the colonists at Jamestown mutilated coins to fashion magical talismans. I review post-medieval English traditions about Divine Providence, Dead Saints, and Witchcraft and show how these ideas were brought to the New World. Talismans from Maryland and Massachusetts are also discussed. I have spent several years examining the coins excavated at Jamestown, most of them not yet available for public viewing. This book is fascinating and unlike anything you have read before. My book is available from major Internet sellers. Order it from me, and I will sign it and include a four-page guide to collecting coins from Jamestown. Thanks, Michael Shutty Jr. at [mykshutty@yahoo.com](mailto:mykshutty@yahoo.com).



- 1 1785 Vermonts, Vermontis, or Vermontensium Copper (with a smooth planchet) in PCGS or NGC xf40 (one of any one of the noted varieties.)
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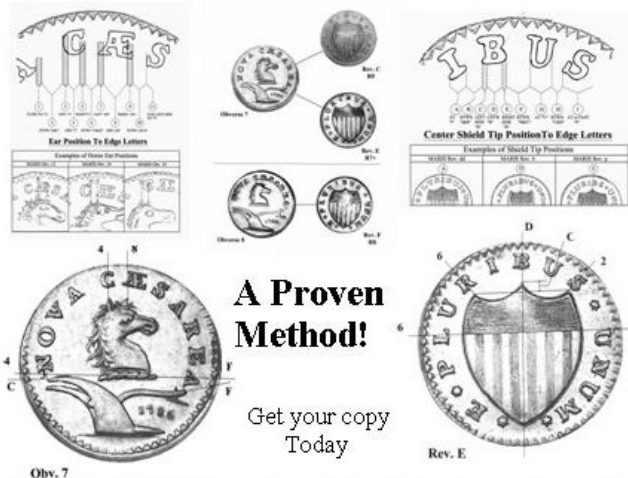
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